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FINAL
TREATABILITY STUDY IN SUPPORT OF
INTRINSIC REMEDIATION FOR
SITE 0T 24

at

MACDILL AIR FORCE BASE
TAMPA, FLORIDA

VOLUME II of II

January 1997

Prepared for:

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE
TECHNOLOGY TRANSFER DIVISION
BROOKS AIR FORCE BASE
SAN ANTONIO, TEXAS

AND

6 CES/CEVR
MACDILL AIR FORCE BASE
TAMPA, FLORIDA

Prepared by:

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APPENDIX A

**INFORMATION FROM CH2M HILL (1990 AND 1991A) AND
ENSERCH ENVIRONMENTAL (1994A AND 1994B)**

TABLE 2.2
SUMMARY OF GROUND WATER LEVEL/PRODUCT THICKNESS MEASUREMENTS
SITE OT-24
INTRINSIC REMEDIATION TS
MACDILL AFB, FLORIDA

Well Identification	Total Reported Depth (Feet bgs)	Measured Depth (Feet)	Well Diameter (Inches)	Depth to Product (Feet BTOC) ^u				Depth to Water (Feet BTOC)				Product Thickness (Feet)				Water Elevation (Feet ngvd)	
				9/15/89	9/20/89	10/2/89	5/23/94	8/10/94	9/15/89	9/20/89	10/2/89	5/23/94	8/10/94	9/20/89	10/2/89	5/23/94	8/10/94
PW-1	20.1	NM ^v	5	NA ^d	NA	NA	NA	-	NA	NA	NA	NM	0.6	NA	NA	-	NM
PW-3	NR ^v	9.28	NR	NA	NA	NA	NA	3.69	NA	NA	NA	8.86	5.62	NA	NA	1.93	-0.07
PW-8	NR	6.34	NR	NA	NA	NA	NA	-	NA	NA	NA	Dry	3.57	NA	NA	-	8.41
PW-10	NR	7.8	NR	NA	NA	NA	NA	-	NA	NA	NA	7	3.95	NA	NA	-	0.92
PW-1	20.0	NM	6	NA	NA	NA	NA	-	NA	NA	NA	5.48	1.85	NA	NA	-	0.93
RW-2	20.0	NM	6	NA	NA	NA	NA	1.66	NA	NA	NA	6.09	2.26	NA	NA	0.6	0.31
OB-1	20.3		2	NA	NA	NA	NA	-	NA	NA	NA	-	-	NA	NA	-	-
MD24-1	20.0	19.7	2	NA	NA	NA	NA	-	NA	NA	NA	8	4.68	NA	NA	-	0.29
MD24-2	20.0	20.11	2	NA	NA	NA	NA	-	NA	NA	NA	7.12	3.23	NA	NA	-	0.33
MD24-3	20.0	21.73	2	NA	NA	NA	NA	-	NA	NA	NA	7.24	3.53	NA	NA	-	0.39
MD24-4	20.0	20.23	2	NA	NA	NA	NA	-	NA	NA	NA	7.45	3.64	NA	NA	-	0.44
MD24-5	12.0	11.7	2	NA	NA	NA	NA	-	NA	NA	NA	4.05	0	NA	NA	-	0.25
MD24-6	12.5	25.38	2	NA	NA	NA	NA	-	NA	NA	NA	3.99	0.8	NA	NA	-	NR
MD24-6A	29.0	11.76	2	NA	NA	NA	NA	-	NA	NA	NA	3.71	0.3	NA	NA	-	0.11
MD24-7	12.2	11.92	2	NA	NA	NA	NA	-	NA	NA	NA	3.55	0.6	NA	NA	-	-0.15
MD24-8	12.2	12.84	2	NA	NA	NA	NA	-	NA	NA	NA	3.91	0.6	NA	NA	-	-0.15
MD24-9	12.2	12.45	2	NA	NA	NA	NA	-	NA	NA	NA	3.62	0.9	NA	NA	-	0.4
MD24-10	12.3	12.84	2	NA	NA	NA	NA	-	NA	NA	NA	3.12	0	NA	NA	-	-0.01
MD24-10A	29.0	28.88	2	NA	NA	NA	NA	-	NA	NA	NA	3.18	0	NA	NA	-	NR
P-1	5.1	NM	2	NA	NA	NA	NA	NA	1.52	2.29	2.63	NM	NA	-	NA	NA	NA
P-2	5.1	NM	2	-	-	-	-	NA	1.38	2.63	4.28	NM	NA	-	NA	NA	NA
P-3	6.9	NM	2	2.11	3.04	2.21	2.49	NA	4.1	4.94	5.11	NA	NA	1.99	1.9	2.07	NA
P-4	7.6	NM	2	2.33	3.32	2.49	2.49	NA	4.9	5.72	5.11	NA	NA	2.57	2.4	2.62	NA
P-5	6.4	NM	2	2.1	2.89	2.21	2.49	NA	3.79	5.37	4.69	NA	NA	1.69	2.48	2.48	NA
P-6	5.9	NM	2	1.76	2.52	1.46	1.46	NA	3.37	4.93	4.58	NA	NA	1.61	2.41	3.12	NA
P-7	5.1	NM	2	1.61	2.27	1.75	1.75	NA	2.18	3.72	2.44	NA	NA	0.57	1.45	0.69	NA
P-8	4.0	NM	2	-	-	-	-	NA	1.35	2.39	NM	NA	NA	-	-	-	NA
P-9	6.4	NM	2	-	-	-	-	NA	2.22	2.39	NM	NA	NA	-	-	-	NA
P-10	5.1	NM	2	-	-	-	-	NA	1.93	2.72	NM	NA	NA	-	-	-	NA

Source: CH2M Hill, 1991b

^v BTOC = Below top of casing

^v NM = not measured

^v NM^u = not available

^v NA = not reported

^u NA = not reported

CAMHILL

FIGURE 5
POTENTIOMETRIC SURFACE OF THE SURFICIAL AQUIFER
AT SITE OT 24
AUGUST 1, 1989 MACDILL AFB

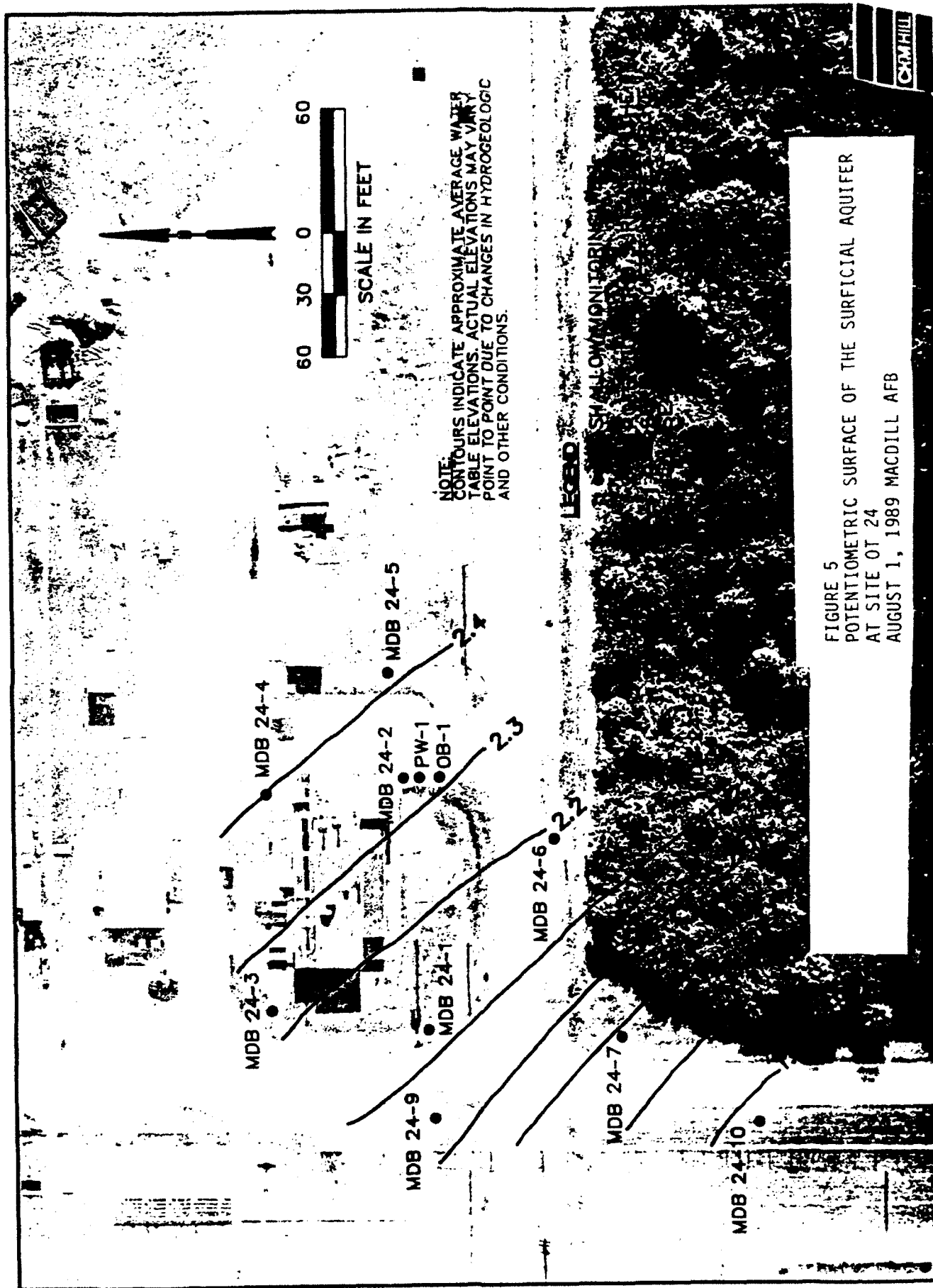


Table 1-3
OVA SAMPLING RESULTS FOR JUNE 1989, SITE OT 24, MACDILL AFB

<u>SAMPLE #</u>	<u>A</u> <u>(0-1 ft)</u>	<u>B</u> <u>(1-2 ft)</u>	<u>C</u> <u>(2-3 ft)</u>
1	>10,000	--	--
2	5500	--	--
3	5000	--	--
4	10	--	--
5	11	--	--
6	<10	--	--
7	<10	--	--
8	15	>10,000	>10,000
9	>10,000	--	--
10	>10,000	>10,000	--
11	10	10,000	--
12	<10	800	--
13	<10	--	--
14	<10	<10	--
15	<10	<10	<10
16	<10	<10	100
17	<10	<10	20
18	<10	<10	--
19	550	10,000	>10,000

Results are expressed in ppm
-- = Sample not collected

See Figure 1-4 for location of samples.

table

Table 1-4
SUMMARY OF SOIL AND SEDIMENT DATA FOR JUNE 1989, SITE OT 24, MACDILL AFB

LOCATION	EPA METHOD 602 µg/Kg	TOTAL METALS mg/Kg	EP TOXICITY mg/Kg	PETROLEUM HYDROCARBONS mg/Kg
SD24-3	Ethylbenzene - 2,300 Total Xylenes - 5,800	Arsenic - 0.74 Cadmium - 3.4 Chromium - 255	Cadmium - 0.0058 Chromium - 0.033 Lead - 0.049	9,790
SD24-8B	Benzene - 210 Toluene - 400 Ethylbenzene - 3,400 Total Xylenes - 18,000	Arsenic - 0.4 Lead - 6.1		3,600
SD24-10B	Benzene - 11,000 Toluene - 360,000 Ethylbenzene - 560,000 Total Xylenes - 290,000	Arsenic - 0.85 Chromium - 10 Lead - 35		22,580
SD24-12B	Total Xylenes - 610	Arsenic - 0.62 Chromium - 4 Lead - 26		344

TPR15025.50

GROUNDWATER MONITORING DATA FOR DECEMBER 1988 AND APRIL 1989, SITE 24, MACDILL AFB

Table 4-3

	VOLATILES DECEMBER 1988 µg/l	VOLATILES MAY 1989 µg/l	SEMI-VOLATILES DECEMBER 1988 µg/l	METALS DECEMBER 1988 µg/l	METALS APRIL 1989 µg/l
MD24-1	Benzene - 180 Toluene - 43 Ethylbenzene - 2	Benzene - 99 Toluene - 2	Naphthalene - 13	Lead - 2	
MD24-2	Methyl Chloride - 29 Acetone - 19 Total Xylenes - 3	Benzene - 55 Toluene - 3.8 Ethylbenzene - 4.2 Total Xylenes - 14	Naphthalene - 6 2-Methylnaphthalene - 2	Chromium - 43 Lead - 15	
MD24-3	Methylene Chloride - 12 Carbon Disulfide - 2		Bis(2-ethylhexyl) phthalate - 900	Chromium - 10 Lead - 4	
MD24-4	Methylene Chloride - 7		Bis(2-ethylhexyl) phthalate - 150	Chromium - 284 Lead - 45	Chromium unfiltered - 90 filtered - <50
Holding Tank	Methylene Chloride - 34 Acetone - 1,100,000 Benzene - 3,900 Toluene - 7,200 Ethylbenzene - 300 Total Xylenes - 2,400		2-Methylphenol - 55 4-Methylphenol - 110 Naphthalene - 190 2-Methylnaphthalene - 190 Bis(2-ethylhexyl) phthalate - 33	Lead - 6	

11PR15025.50

Table 4-4
GROUNDWATER MONITORING DATA FOR AUGUST 1989, SITE 24, MACDILL AFB

	VOLATILES µg/l	SEMI-VOLATILES µg/l	LEAD µg/l
MD24-1	Methylene Chloride - 3 1,1-Dichloroethane - 2 Benzene - 170 Ethylbenzene - 2	Naphthalene - 15	7
MD24-2	Methylene Chloride - 5 Benzene - 30 Ethylbenzene - 5 Total Xylenes - 8	Naphthalene - 3	9
MD24-3	Chloromethane - 1 Methylene Chloride - 10 Acetone - 11	Bis(2-ethylhexyl) phthalate - 3	6
MD24-4	Methylene Chloride - 13	Bis(2-ethylhexyl) phthalate - 3	6
MD24-5	Methylene Chloride - 5	Bis(2-ethylhexyl) phthalate - 2	28
MD24-6	Methylene Chloride - 7 1,1-Dichloroethane - 1 Benzene - 120	Naphthalene - 7	14
MD24-7	Methylene Chloride - 4	Bis(2-ethylhexyl) phthalate - 37	29
MD24-8	Chloromethane - 1 Methylene Chloride - 7	ND	6
MD24-9	Methylene Chloride - 9 2-Butanone - 25	ND	10
MD24-10	Methylene Chloride - 5	ND	8

Table 4-6
PUMPING TEST WATER QUALITY SUMMARY FOR SITE 24, MACDILL AFB

AUGUST 1989

CONSTITUENTS	TIME SINCE PUMPING BEGAN (HRS)		
	8	24	48
EPA Method 601			
Vinyl Chloride	23	19	22
1,1-Dichloroethane	25	26	23
EPA Method 602			
Benzene	820	930	930
Toluene	600	170	320
Ethylbenzene	110	45	140
Total Xylenes	180	65	125
EPA Method 610			
Naphthalene	30	N/A	28
2-Methylnaphthalene	17	N/A	9
1-Methylnaphthalene	10	N/A	5
TOC - Liquid (mg/l)	18.2	N/A	16.9
Inorganics (results in mg/l)			
Iron	4.67	N/A	4.36
Lead	<0.002	N/A	<0.002
Total Hardness as CaCO ₃	392	N/A	390

N/A - not analyzed

Results are expressed in µg/l except where noted

Table 1
SUMMARY OF GROUNDWATER MONITORING DATA
OCTOBER 1990

EPA Methods 601 & 602												
MD24-1	MD24-2	MD24-3	MD24-4	MD24-5	MD24-6	MD24-6A	MD24-7	MD24-8	MD24-9	MD24-10	MD24-10A	
(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	2.0	1.4	1.0 U	1.0 U	1.1	2.9	1.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1,1-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene and Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl Tert-Butyl Ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	6.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	30	37	1.0 U	1.0 U	6.3	33	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Benzene	1.0 U	2.7 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes	1.0 U	1.4 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Volatile Aromatic Organics	32	42.5	BMDL	1.3	BMDL	20.4	35.9	8.1	BMDL	BMDL	BMDL	BMDL

U - Compound analyzed for but not detected
BMDL - Below method detection limits

10010A34.GNV

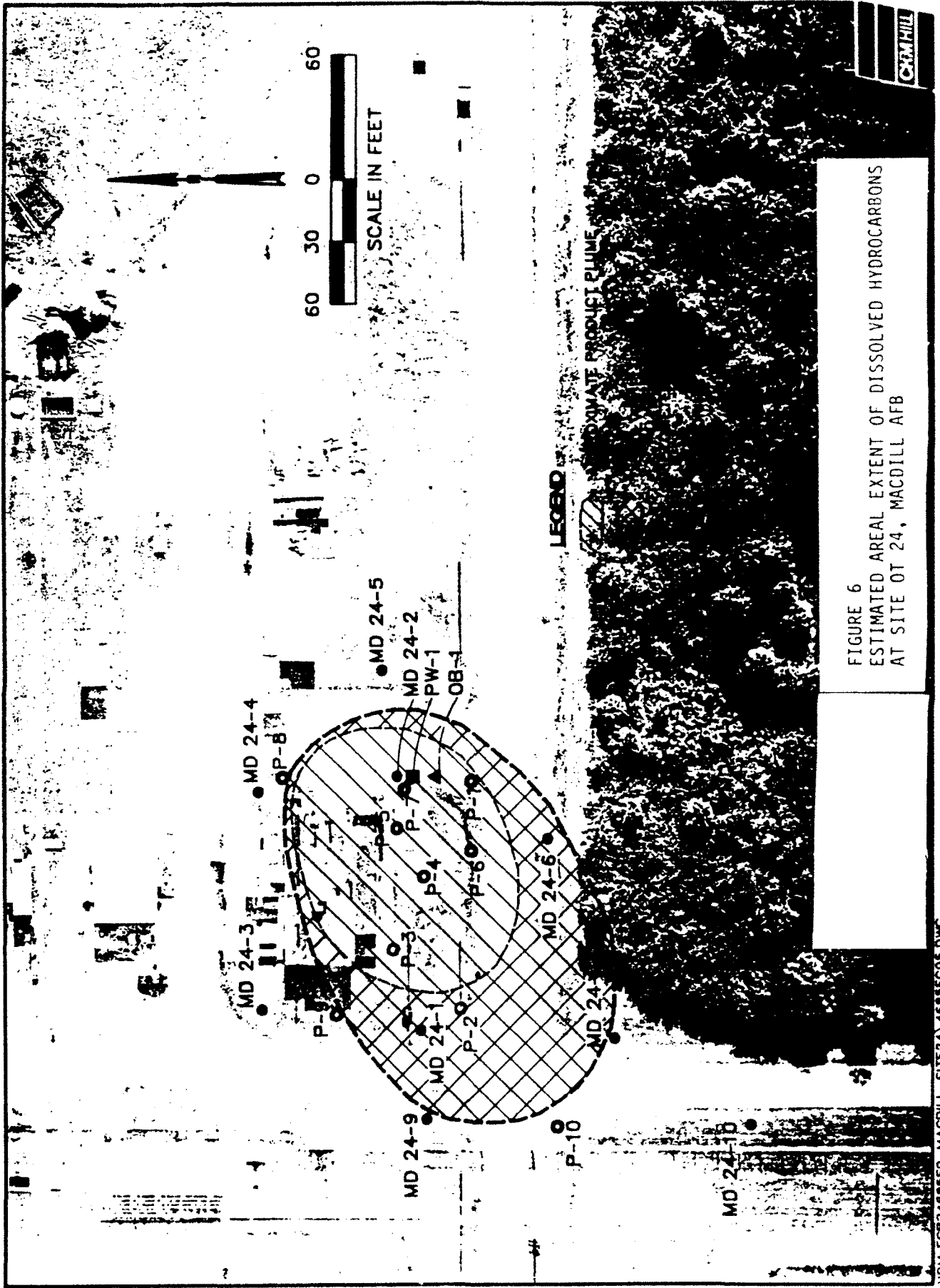


FIGURE 6
ESTIMATED AREAL EXTENT OF DISSOLVED HYDROCARBONS
AT SITE OT 24, MACDILL AFB

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

CASE NARRATIVE: SL Project: B430998

Date: June 13, 1994

Client: Ensercn Environmental

Project: MacDill AFB Site 24

Laboratory: Savannah Laboratories and Environmental Services, Inc.
Tampa Bay Division

Sixteen samples were received on May 24, 1994 and logged in as SL project B430998.

Sample '24-MW-07-01-000A' exhibited low surrogate recovery for the EPA 610 analysis due to matrix interference. Reanalysis confirmed this problem.

- Additionally, the matrix spike results for the EPA 610 analysis exhibited low recoveries for benzo(a)pyrene. Although matrix spikes are for advisory purposes only, the samples were reanalyzed with similar results. The lab control samples' results for this analysis were all within acceptance limits.

No other analytical problems occurred with this set of samples.



Andre Rachmaninoff

C:\WP51\AREHSECH.998

Laboratory locations in Savannah, GA • Tallahassee, FL • Mobile, AL • Deerfield Beach, FL • Tampa,

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

LOG NO: B4-30998

Received: 24 MAY 94

Mr. Greg New
Enserch Environmental
759 S.E. Federal Highway
Stuart, Florida 34994-2936

Project: MacDill AFB Site 24
Sampled By: Client

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED				
30998-1	24-MW-06-01-000A	05-24-94				
30998-2	24-MW-07-01-000A	05-24-94				
30998-3	24-MW-08-01-000A	05-24-94				
30998-4	24-MW-10-01-000A	05-24-94				
30998-5	24-MW-05-01-000A	05-24-94				
PARAMETER	30998-1	30998-2	30998-3	30998-4	30998-5	
Purgeable Halocarbons (601)						
Bromodichloromethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
Bromoform, ug/l	<25	<5.0	<5.0	<5.0	<5.0	
Bromomethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
Carbon Tetrachloride, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
Chlorobenzene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
Chloroethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
2-Chloroethylvinyl Ether, ug/l	<50	<10	<10	<10	<10	
Chloroform, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
Chloromethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
Dibromochloromethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
1,2-Dichlorobenzene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
1,3-Dichlorobenzene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
1,4-Dichlorobenzene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
Dichlorodifluoromethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
1,1-Dichloroethane, ug/l	7.1	6.3	<1.0	<1.0	<1.0	
1,2-Dichloroethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
1,1-Dichloroethene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
cis/trans-1,2-Dichloroethylene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
1,2-Dichloropropane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	
cis-1,3-Dichloropropene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

LOG NO: B4-30998

Received: 24 MAY 94

Mr. Greg New
Enserch Environmental
759 S.E. Federal Highway
Stuart, Florida 34994-2936

Project: MacDill AFB Site 24
Sampled By: Client

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE SAMPLED	
30998-1	24-MW-06-01-000A			05-24-94	
30998-2	24-MW-07-01-000A			05-24-94	
30998-3	24-MW-08-01-000A			05-24-94	
30998-4	24-MW-10-01-000A			05-24-94	
30998-5	24-MW-05-01-000A			05-24-94	
PARAMETER	30998-1	30998-2	30998-3	30998-4	30998-5
trans-1,3-Dichloropropene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride (Dichloromethane), ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, ug/l	7.6	4.0	<1.0	<1.0	<1.0
Surrogate - Bromochloromethane, ug/l	15.1	15.1	15.0	15.1	15.1
Surrogate-Expected Value, ug/l	15	15	15	15	15
Surrogate-Z Recovery	100 %	100 %	100 %	100 %	100 %
Surrogate-Control Limit	46-118 %	46-118 %	46-118 %	46-118 %	46-118 %
Date Analyzed	05.31.94	05.31.94	05.31.94	05.31.94	05.31.94
Batch ID	0531Q	0531Q	0531Q	0531Q	0531Q

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Project: MacDill AFB Site 24
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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE SAMPLED	
30998-1	24-MW-06-01-000A			05-24-94	
30998-2	24-MW-07-01-000A			05-24-94	
30998-3	24-MW-08-01-000A			05-24-94	
30998-4	24-MW-10-01-000A			05-24-94	
30998-5	24-MW-05-01-000A			05-24-94	
PARAMETER	30998-1	30998-2	30998-3	30998-4	30998-5
Purgeable Aromatics (EPA 602)					
Benzene, ug/l	160	4.2	<1.0	<1.0	<1.0
Toluene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
Total Xylenes, ug/l	<5.0	<1.0	<1.0	<1.0	<1.0
Total Volatile Organic Aromatics, ug/l	160	4.2	<1.0	<1.0	<1.0
Methyl-Tert-Butyl-Ether (MTBE), ug/l	<50	<10	<10	<10	<10
Surrogate - a,a,a - Trifluorotoluene, ug/l	20.0	20.0	20.0	20.0	20.0
Surrogate - Expected Value, ug/l	20	20	20	20	20
Surrogate - % Actual Recovery	100 %	100 %	100 %	100 %	100 %
Surrogate - Control Limit	77-140 %	77-140 %	77-140 %	77-140 %	77-140 %
Date Analyzed	05.31.94	05.31.94	05.31.94	05.31.94	05.31.94
Batch ID	0531Q	0531Q	0531Q	0531Q	0531Q

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Project: MacDill AFB Site 24
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED			
30998-6	24-MW-09-01-000A	05-24-94			
30998-7	24-MW-01-01-001A	05-23-94			
30998-8	24-MW-06A-01-001A	05-23-94			
30998-9	24-MW-10A-01-001A	05-23-94			
30998-10	24-MW-03-01-000B	05-24-94			
PARAMETER	30998-6	30998-7	30998-8	30998-9	30998-10
Purgeable Halocarbons (601)					
Bromodichloromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
2-Chloroethylvinyl Ether, ug/l	<10	<10	<10	<10	<10
Chloroform, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane, ug/l	<1.0	1.3	2.2	1.1	<1.0
1,2-Dichloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
cis/trans-1,2-Dichloroethylene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0

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LOG NO: B4-30998

Received: 24 MAY 94

Mr. Greg New
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Project: MacDill AFB Site 24
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED				
30998-6	24-MW-09-01-000A	05-24-94				
30998-7	24-MW-01-01-001A	05-23-94				
30998-8	24-MW-06A-01-001A	05-23-94				
30998-9	24-MW-10A-01-001A	05-23-94				
30998-10	24-MW-03-01-000B	05-24-94				
PARAMETER	30998-6	30998-7	30998-8	30998-9	30998-10	
trans-1,3-Dichloropropene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	
Methylene Chloride (Dichloromethane), ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1,2,2-Tetrachloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	
Tetrachloroethene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1,1-Trichloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1,2-Trichloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	
Trichloroethylene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	
Trichlorofluoromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	
Vinyl Chloride, ug/l	<1.0	<1.0	2.0	<1.0	<1.0	
Surrogate - Bromochloromethane, ug/l	15.1	15.0	14.7	15.1	15.0	
Surrogate-Expected Value, ug/l	15	15	15	15	15	
Surrogate-Z Recovery	100 Z	100 Z	98 Z	100 Z	100 Z	
Surrogate-Control Limit	46-118 Z	46-118 Z	46-118 Z	46-118 Z	46-118 Z	
Date Analyzed	05.31.94	06.01.94	06.01.94	05.31.94	06.01.94	
Batch ID	0531Q	0531Q	0531Q	0531Q	0531Q	

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Project: MacDill AFB Site 24
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE SAMPLED	
30998-6	24-MW-09-01-000A			05-24-94	
30998-7	24-MW-01-01-001A			05-23-94	
30998-8	24-MW-06A-01-001A			05-23-94	
30998-9	24-MW-10A-01-001A			05-23-94	
30998-10	24-MW-03-01-000B			05-24-94	
PARAMETER	30998-6	30998-7	30998-8	30998-9	30998-10
Purgeable Aromatics (EPA 602)					
Benzene, ug/l	<1.0	<1.0	23	<1.0	<1.0
Toluene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylenes, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Total Volatile Organic Aromatics, ug/l	<1.0	<1.0	23	<1.0	<1.0
Methyl-Tert-Butyl-Ether (MTBE), ug/l	<10	<10	<10	<10	<10
Surrogate - a,a,a - Trifluorotoluene, ug/l	20.0	20.0	20.0	20.0	20.0
Surrogate - Expected Value, ug/l	20	20	20	20	20
Surrogate - % Actual Recovery	100 %	100 %	100 %	100 %	100 %
Surrogate - Control Limit	77-140 %	77-140 %	77-140 %	77-140 %	77-140 %
Date Analyzed	05.31.94	06.01.94	06.01.94	05.31.94	06.01.94
Batch ID	0531Q	0531Q	0531Q	0531Q	0531Q

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

CASE NARRATIVE: SL Project: B431903

Date: September 19, 1994

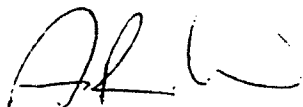
Client: Enserch Environmental

Project: MacDill Site 24 Task 13/Sample Period 02

Laboratory: Savannah Laboratories and Environmental Services, Inc.
Tampa Bay Division

Sixteen samples were received on August 31, 1994 and logged in as SL project B431903.

No analytical problems were encountered with this set of samples.



Andre Rachmaninoff

C:\WP51\AR\ENSERCH.902

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

LOG NO: B4-31903

Received: 31 AUG 94

Mr. Greg New
Enserch Environmental
759 S.E. Federal Highway
Stuart, Florida 34994-2936

Project: MacDill Site 24/Task 13 Sample Period 02
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED				
31903-1	24-MW1-02-002B	08-31-94				
31903-2	24-MW2-02-002B	08-31-94				
31903-3	24-MW3-02-002C	08-31-94				
31903-4	24-MW3-QC-02-002C	08-31-94				
31903-5	24-MW4-02-002B	08-31-94				
PARAMETER		31903-1	31903-2	31903-3	31903-4	31903-5
Purgeable Halocarbons (601)						
Bromodichloromethane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform, ug/l		<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
2-Chloroethylvinyl Ether, ug/l		<10	<10	<10	<10	<10
Chloroform, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
cis/trans-1,2-Dichloroethylene, ug/l		<1.0	1.7	<1.0	<1.0	<1.0
1,2-Dichloropropane, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene, ug/l		<1.0	<1.0	<1.0	<1.0	<1.0

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LOG NO: B4-31903

Received: 31 AUG 94

Mr. Greg New
Enserch Environmental
759 S.E. Federal Highway
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Project: MacDill Site 24/Task 13 Sample Period 02
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE SAMPLED	
31903-1	24-MW1-02-002B			08-31-94	
31903-2	24-MW2-02-002B			08-31-94	
31903-3	24-MW3-02-002C			08-31-94	
31903-4	24-MW3-QC-02-002C			08-31-94	
31903-5	24-MW4-02-002B			08-31-94	
PARAMETER	31903-1	31903-2	31903-3	31903-4	31903-5
trans-1,3-Dichloropropene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride (Dichloromethane), ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene, ug/l	<1.0	2.3	<1.0	<1.0	<1.0
Trichlorofluoromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, ug/l	<1.0	1.2	<1.0	<1.0	<1.0
Surrogate - Bromochloromethane	12.0	14.5	12.4	13.3	11.9
Surrogate-Expected Value	15	15	15	15	15
Surrogate-Σ Recovery	80 %	97 %	83 %	88 %	79 %
Surrogate-Control Limit	50-136 %	50-136 %	50-136 %	50-136 %	50-136 %
Date Analyzed	09.02.94	09.02.94	09.02.94	09.02.94	09.02.94
Batch ID	0901Q	0901Q	0901Q	0901Q	0901Q

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Project: MacDill Site 24/Task 13 Sample Period 02
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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE SAMPLED	
31903-1	24-MW1-02-002B			08-31-94	
31903-2	24-MW2-02-002B			08-31-94	
31903-3	24-MW3-02-002C			08-31-94	
31903-4	24-MW3-QC-02-002C			08-31-94	
31903-5	24-MW4-02-002B			08-31-94	
PARAMETER	31903-1	31903-2	31903-3	31903-4	31903-5
Purgeable Aromatics (EPA 602)					
Benzene, ug/l	<1.0	38	<1.0	<1.0	<1.0
Toluene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene, ug/l	<1.0	1.4	<1.0	<1.0	<1.0
Total Xylenes, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Total Volatile Organic Aromatics, ug/l	<1.0	39.4	<1.0	<1.0	<1.0
Methyl-Tert-Butyl-Ether (MTBE), ug/l	<10	<10	<10	<10	<10
Surrogate - a,a,a - Trifluorotoluene	20.9	21.5	22.3	21.5	20.6
Surrogate - Expected Value	20	20	20	20	20
Surrogate - % Actual Recovery	104 %	108 %	112 %	101 %	103 %
Surrogate - Control Limit	77-140 %	77-140 %	77-140 %	77-140 %	77-140 %
Date Analyzed	09.02.94	09.02.94	09.02.94	09.02.94	09.02.94
Batch ID	0901Q	0901Q	0901Q	0901Q	0901Q

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LOG NO: B4-31903

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Project: MacDill Site 24/Task 13 Sample Period 02
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED			
31903-6	24-MW6-02-001A	08-30-94			
31903-7	24-MW6A-02-001A	08-30-94			
31903-8	24-MW7-02-001A	08-30-94			
31903-9	24-MW8-02-002B	08-31-94			
31903-10	24-MW9-02-001A	08-30-94			
PARAMETER	31903-6	31903-7	31903-8	31903-9	31903-10
Purgeable Halocarbons (601)					
Bromodichloromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
2-Chloroethylvinyl Ether, ug/l	<10	<10	<10	<10	<10
Chloroform, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane, ug/l	<1.0	1.6	<1.0	<1.0	<1.0
1,2-Dichloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
cis/trans-1,2-Dichloroethylene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0

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LOG NO: B4-31903

Received: 31 AUG 94

Mr. Greg New
Enserch Environmental
759 S.E. Federal Highway
Stuart, Florida 34994-2936

Project: MacDill Site 24/Task 13 Sample Period 02
Sampled By: Client

REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES				DATE SAMPLED
31903-6	24-MW6-02-001A				08-30-94
31903-7	24-MW6A-02-001A				08-30-94
31903-8	24-MW7-02-001A				08-30-94
31903-9	24-MW8-02-002B				08-31-94
31903-10	24-MW9-02-001A				08-30-94
PARAMETER	31903-6	31903-7	31903-8	31903-9	31903-10
trans-1,3-Dichloropropene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride (Dichloromethane), ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate - Bromochloromethane	13.7	12.4	10.7	12.7	11.5
Surrogate-Expected Value	15	15	15	15	15
Surrogate-Z Recovery	91 Z	83 Z	71 Z	85 Z	77 Z
Surrogate-Control Limit	50-136 Z	50-136 Z	50-136 Z	50-136 Z	50-136 Z
Date Analyzed	09.02.94	09.02.94	09.02.94	09.02.94	09.02.94
Batch ID	0902Q	0901Q	0901Q	0901Q	0901Q

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LOG NO: B4-31903

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Mr. Greg New
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759 S.E. Federal Highway
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Project: MacDill Site 24/Task 13 Sample Period 02
Sample: By: Client

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE SAMPLED	
31903-6	24-MW6-02-001A			08-30-94	
31903-7	24-MW6A-02-001A			08-30-94	
31903-8	24-MW7-02-001A			08-30-94	
31903-9	24-MW8-02-002B			08-31-94	
31903-10	24-MW9-02-001A			08-30-94	
PARAMETER	31903-6	31903-7	31903-8	31903-9	31903-10
Purgeable Aromatics (EPA 602)					
Benzene, ug/l	<1.0	20	<1.0	<1.0	<1.0
Toluene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylenes, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Total Volatile Organic Aromatics, ug/l	<1.0	20	<1.0	<1.0	<1.0
Methyl-Tert-Butyl-Ether (MTBE), ug/l	<10	<10	<10	<10	<10
Surrogate - a,a,a - Trifluorotoluene	20.8	19.3	19.3	19.2	19.1
Surrogate - Expected Value	20	20	20	20	20
Surrogate - % Actual Recovery	104 %	95 %	96 %	96 %	95 %
Surrogate - Control Limit	77-140 %	77-140 %	77-140 %	77-140 %	77-140 %
Date Analyzed	09.02.94	09.02.94	09.02.94	09.02.94	09.02.94
Batch ID	0902Q	0901Q	0901Q	0901Q	0901Q

APPENDIX B

**GEOLOGIC LOGS,
MONITORING POINT INSTALLATION RECORDS,
MONITORING POINT/WELL DEVELOPMENT AND
SAMPLING RECORDS,
SLUG TESTING RESULTS, AND
SURVEY DATA**

GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-1A CONTRACTOR: PARSONS ES DATE SPUD: 3/8/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/8/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: _____
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: _____
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: RAIN
 COMMENTS: _____

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample No.	Sample Depth (ft)	Sample Type	Penet Res	PID(ppm)	WKSPPC PID(ppm)	TOTAL BTX(ppm)	TPH (ppm)
	1			Dark brown, fine- to medium-grained, quartz sand FILL with silt. Subangular to subrounded grains.								
			SP	Brown, fine- to medium-grained quartz SAND. Subangular to subrounded grains. Wet. Hydrocarbon odor at 3 feet bgs. Saturated at 4.5 feet bgs.	1	3-4			81.8			
	5			SAA with strong hydrocarbon odor and dark staining.								
			SW	Light brown, fine- to medium-grained SAND. Well sorted, subangular to subrounded quartz grains.					99.9			
	10											
				Bottom of hole at 12 feet bgs.					705			
	15											
	20											
	25											
	30											
	35											


CONTINUOUS CORE

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB

 Water level drilled

GEOLOGIC BORING LOG

Intrinsic Remediation TS
 MacDill Air Force Base, Florida

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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-1B CONTRACTOR: PARSONS ES DATE SPUD: 3/8/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/8/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: _____
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: _____
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: RAIN
 COMMENTS: _____

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample		Penet Res				
					No.	Depth (ft)		WSPC	TOTAL	TPH	
	1			No Sample. FILL.							
	5		SP	Brown, fine- to medium-grained SAND with silt. Strong hydrocarbon odor with staining.							
	10		SW	Light brown, fine- to medium-grained quartz SAND. Well sorted. Hydrocarbon odor present.	1	8-9					
	15			Bottom of hole at 13 feet bgs.							
	20										
	25										
	30										
	35										

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB



Water level drilled

GEOLOGIC BORING LOG

Intrinsic Remediation TS
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Sheet 1 of 1

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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-1S CONTRACTOR: PARSONS ES DATE SPUD: 3/8/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/8/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: 5.66
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: _____
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: RAIN
 COMMENTS: _____

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample		Penet Res	PID(ppm)	WSPC PID(ppm)	TOTAL BTEX(ppm)	TPH (ppm)
					No.	Depth (ft)					
	1			Dark brown, fine- to medium-grained, quartz sand FILL with silt. Subangular to subrounded grains.							
			SP	Brown, fine- to medium-grained quartz SAND. Subangular to subrounded grains. Wet. Hydrocarbon odor at 3 feet bgs. Saturated at 4.5 feet bgs.	1	3-4		81.8			
	5			SAA with strong hydrocarbon odor and dark staining.					99.9		
			SW	Light brown, fine- to medium-grained SAND. Well sorted, subangular to subrounded quartz grains.							
	10									705	
				Bottom of hole at 12 feet bgs.							
	15										
	20										
	25										
	30										
	35										

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB



Water level drilled

GEOLOGIC BORING LOG

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Sheet 1 of 1

BORING NO.:	24SS-1	CONTRACTOR:	PARSONS ES	DATE SPUD:	3/10/95
CLIENT:	AFCEE	RIG TYPE:	GEOPROBE	DATE CMPL:	3/10/95
JOB NO.:	722450.21	DRLG METHOD:	GEOPROBE	ELEVATION:	5.56
LOCATION:	MACDILL AFB	BORING DIA.:	2 INCHES	TEMP:	WARM
GEOLOGIST:	KC	DRLG FLUID:	NONE	WEATHER:	CLEAR, SUNNY
COMMENTS:	BACKGROUND PID = 7.6 ppmv				

[illegible]


NOTES

bgs - Below Ground Surface
GS - Ground Surface
TOC - Top of Casing
NS - Not Sampled
SAA - Same As Above

SAMPLE TYPE

D - DRIVE
C - CORE
G - GRAB



 Water level drilled

GEOLOGIC BORING LOG

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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24SS-3 CONTRACTOR: PARSONS ES DATE SPUD: 3/11/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/11/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: NM
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: COOL
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: CLEAR, SUNNY
 COMMENTS: BACKGROUND PID = 7.1 ppmv

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample No.	Sample Depth (ft)	Sample Type	Penet Res	PID(ppm)	WSPC PID(ppm)	TOTAL BTX(ppm)	TPH (ppm)
▼	1		SP	Grovelly, sandy FILL to 1 foot bgs. Brown, fine- to medium-grained, silty sandy FILL. Saturated at 2 feet bgs. Woody vegetation present.	1	2-4	CONTINUOUS CORE		>1000			
	5		SW	Light brown, fine- to medium-grained, well-sorted SAND. No sample. Sample too saturated to recover.					>1000			
	10				2	9-11			35.7			
									>1000			
				Bottom of hole at 12 feet bgs.								
	15											
	20											
	25											
	30											
	35											

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB

▼ Water level drilled

GEOLOGIC BORING LOG

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Sheet 1 of 1

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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-3 CONTRACTOR: PARSONS ES DATE SPUD: 3/9/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/9/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: 4.17
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: COOL
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: CLEAR
 COMMENTS: BACKGROUND PID = 3.5 ppmv

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample No.	Sample Depth (ft)	Sample Type	Penet Res	PID(ppm)	WSPC PID(ppm)	TOTAL BTX(ppm)	TPH (ppm)
	1		SP	Brown topsoil to 0.5 feet bgs. Brown, fine-grained, silty sand FILL. Subangular to subrounded grains. Saturated at 3 feet bgs.			CONTINUOUS CORE					
	5		SW	Light brown, fine- to medium-grained quartz SAND. More highly sorted.	1	3-5			3.5			
									3.5			
	10								3.5			
									3.5			
	15		SP	Brown, fine- to medium -grained SAND as above.								
				No sample.								
	20		SW	White, well sorted quartz SAND as above.								
				No sample.								
				No sample. Too saturated to stay in sample tube.								
	25			Bottom of hole at 25 feet bgs.								
	30											
	35											

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB

Water level drilled

GEOLOGIC BORING LOG


Intrinsic Remediation TS
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Sheet 1 of 1

BORING NO.:	24MP-4	CONTRACTOR:	PARSONS ES	DATE SPUD:	3/9/95
CLIENT:	AFCEE	RIG TYPE:	GEOPROBE	DATE CMPL.:	3/9/95
JOB NO.:	722450.21	DRLG METHOD:	GEOPROBE	ELEVATION:	5.42
LOCATION:	MACDILL AFB	BORING DIA.:	2 INCHES	TEMP:	COOL
GEOLOGIST:	KC	DRLG FLUID:	NONE	WEATHER:	WINDY
COMMENTS:	BACKGROUND PID = 3.5 ppmv				

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample		Sample Type	Penet Res	PID(ppm)	WKSPPC PID(ppm)	TOTAL BTX(ppm)	TPH (ppm)
					No.	Depth (ft)						
	1		SP	Brown topsoil to 3 inches bgs. Light brown, fine-grained, silty sand FILL. Subangular to subrounded grains. Six inch layer of white, sandy gravel at 1 foot bgs. Areas of grey coloring present.			CONTINUOUS CORE					
	5			SAA. Saturated at 4.5 feet bgs. Turning dark brown.	1	3-5		3.5				
		SW	Light brown, fine- to medium-grained quartz SAND. Well sorted.			3.5		3.5				
		SP	At 8 feet bgs, 1 foot layer of dark brown, silty SAND.			3.5						
	10	SW	White, fine-grained quartz SAND.			3.5						
			Bottom of hole at 10 feet bgs.									
	15											
	20											
	25											
	30											
	35											

NOTES

bgs - Below Ground Surface
GS - Ground Surface
TOC - Top of Casing
NS - Not Sampled
SAA - Same As Above

SAMPLE TYPE

D - DRIVE
C - CORE
G - GRAB



Water level drilled

GEOLOGIC BORING LOG

Intrinsic Remediation TS
MacDill Air Force Base, Florida



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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-5 CONTRACTOR: PARSONS ES DATE SPUD: 3/8/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/8/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: 5.29
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: WARM
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: SUNNY
 COMMENTS: BACKGROUND PID = 3.5 ppmv

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample No.	Sample Depth (ft)	Sample Type	Penet Res	PID(ppm)	WKS PC PID(ppm)	TOTAL BTEX(ppm)	TPH (ppm)
	1		SP	Brown topsoil to 3 inches bgs. Light brown, fine-grained, silty sand FILL. Subangular to subrounded grains. Six inch layer of white, sandy gravel and 6 inch grey sand lens at 1.5 feet bgs. SAA. Saturated at 3.5 feet bgs.	1	3-5	CONTINUOUS CORE		3.5			
	5		SW	Light brown, fine- to medium-grained quartz SAND. Well sorted.					3.5			
	10			No sample.					3.5			
	15		SP	Light brown, fine-grained, silty SAND. Poorly sorted.					3.5			
	20			Bottom of hole at 17 feet bgs.								
	25											
	30											
	35											

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB



Water level drilled

GEOLOGIC BORING LOG

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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-6 CONTRACTOR: PARSONS ES DATE SPUD: 3/9/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/9/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: 4.60
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: WARM
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: WINDY
 COMMENTS: NO PID READING - LOW BATTERY

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample		Penet Res	PIC(ppm)	WKSPC PID(ppm)	TOTAL BTEX(ppm)	TPH (ppm)
					No.	Depth (ft)					
▼	1			No sample.							
				Dark brown, fine-grained, silty sand FILL.							
			SP								
	5			SAA. Saturated at 4.0 feet bgs. Turning light brown.	1	4-6					
			SW	Light brown, fine- to medium-grained quartz SAND. Well sorted.							
	10			Dark grey, dense, highly plastic CLAY.							
			CL								
				Bottom of hole at 12 feet bgs.							
	15										
	20										
	25										
	30										
	35										

CONTINUOUS CORE

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB



Water level drilled

GEOLOGIC BORING LOG

Intrinsic Remediation TS
 MacDill Air Force Base, Florida



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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-7 CONTRACTOR: PARSONS ES DATE SPUD: 3/10/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL: 3/10/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: 1.15
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: COOL
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: WINDY
 COMMENTS: BACKGROUND PID = 7.6 ppmv

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample		Penet Res	PID(ppm)	WVSPC PID(ppm)	TOTAL BTEX(ppm)	TPH (ppm)
					No.	Depth (ft)					
	1			No Sample							
			SP	Brown, fine-grained, silty sand FILL. Subangular to subrounded grains. Saturated at 3 feet bgs.	1	2-4		7.6			
	5							7.6	7.6		
			SW	White, fine- to medium-grained quartz SAND. Well sorted.				7.6			
	10										
			SP	Light brown, fine- to medium-grained SAND with silt to silty SAND. Saturated.				7.6			
	15										
	20			No sample. Too saturated to stay in sample tube.	4						
				Bottom of hole at 22 feet bgs.							
	25										
	30										
	35										

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB

Water level drilled

GEOLOGIC BORING LOG

Intrinsic Remediation TS
 MacDill Air Force Base, Florida



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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-8 CONTRACTOR: PARSONS ES DATE SPUD: 3/10/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL: 3/10/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: 4.26
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: WARM
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: CLEAR
 COMMENTS: BACKGROUND PID = 7.6 ppmv

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample No.	Sample Depth (ft)	Sample Type	Penet Res	PID(ppm)	MSPC PID(ppm)	TOTAL BTEX(ppm)	TPH (ppm)
	1			No Sample								
			SP	Two to three inches of brown topsoil.								
				Dark brown, fine-grained, silty sand FILL. Subangular to subrounded grains. Saturated at 3 feet bgs.	1	3-5			7.6			
	5		SW	Light brown, fine-grained SAND with silt. Dark brown sand clasts present.					7.6	7.6		
				Bottom of hole at 7 feet bgs								
	10											
	15											
	20											
	25											
	30											
	35											

CONTINUOUS CORE

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB



Water level drilled

GEOLOGIC BORING LOG

Intrinsic Remediation TS
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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-9 CONTRACTOR: PARSONS ES DATE SPUD: 3/10/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/10/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: 3.84
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP:
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER: CLEAR, SUNNY
 COMMENTS: NO PID READING - BATTERY LOW

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample		Penet Res				
					No.	Depth (ft)		PID(ppm)	TKSPC PID(ppm)	TOTAL BTEX(ppm)	TPH (ppm)
	1			No sample. FILL			CONTINUOUS CORE				
			SP	Dark brown, fine-grained, silty sand FILL. Subangular to subrounded grains. Saturated at 3.5 feet bgs.	1	3-5					
	5		SW	White to light brown, fine- to medium-grained quartz SAND. Well sorted.							
				No sample.							
			SW	SAA with slight hydrocarbon odor.							
	10				2	9-11					
				Bottom of hole at 12 feet bgs.							
	15										
	20										
	25										
	30										
	35										

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB

Water level drilled

GEOLOGIC BORING LOG

Intrinsic Remediation TS
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GEOLOGIC BORING LOG

Sheet 1 of 1

BORING NO.: 24MP-10 CONTRACTOR: PARSONS ES DATE SPUD: 3/11/95
 CLIENT: AFCEE RIG TYPE: GEOPROBE DATE CMPL.: 3/11/95
 JOB NO.: 722450.21 DRLG METHOD: GEOPROBE ELEVATION: 4.10
 LOCATION: MACDILL AFB BORING DIA.: 2 INCHES TEMP: COOL
 GEOLOGIST: KC DRLG FLUID: NONE WEATHER:
 COMMENTS: BACKGROUND PID = 7.1 ppmv

Elev (ft)	Depth (ft)	Pro- file	US CS	Geologic Description	Sample		Penet Res	PID(ppm)	TKSPC PID(ppm)	TOTAL BTX(ppm)	TPH (ppm)
					No.	Depth (ft)					
	1			No sample. FILL							
			SP	Brown, fine-grained, silty sand FILL. Subangular to subrounded grains. Saturated at 2.5 feet bgs.	1	2-6		7.1	7.1		
	5		SW	White to light brown, fine- to medium-grained quartz SAND. Well sorted.				7.1			
				SAA becoming very well sorted.				7.1			
	10			Bottom of hole at 10 feet bgs.				7.1			
	15										
	20										
	25										
	30										
	35										

NOTES

bgs - Below Ground Surface
 GS - Ground Surface
 TOC - Top of Casing
 NS - Not Sampled
 SAA - Same As Above

SAMPLE TYPE

D - DRIVE
 C - CORE
 G - GRAB



Water level drilled

GEOLOGIC BORING LOG

Intrinsic Remediation TS
 MacDill Air Force Base, Florida

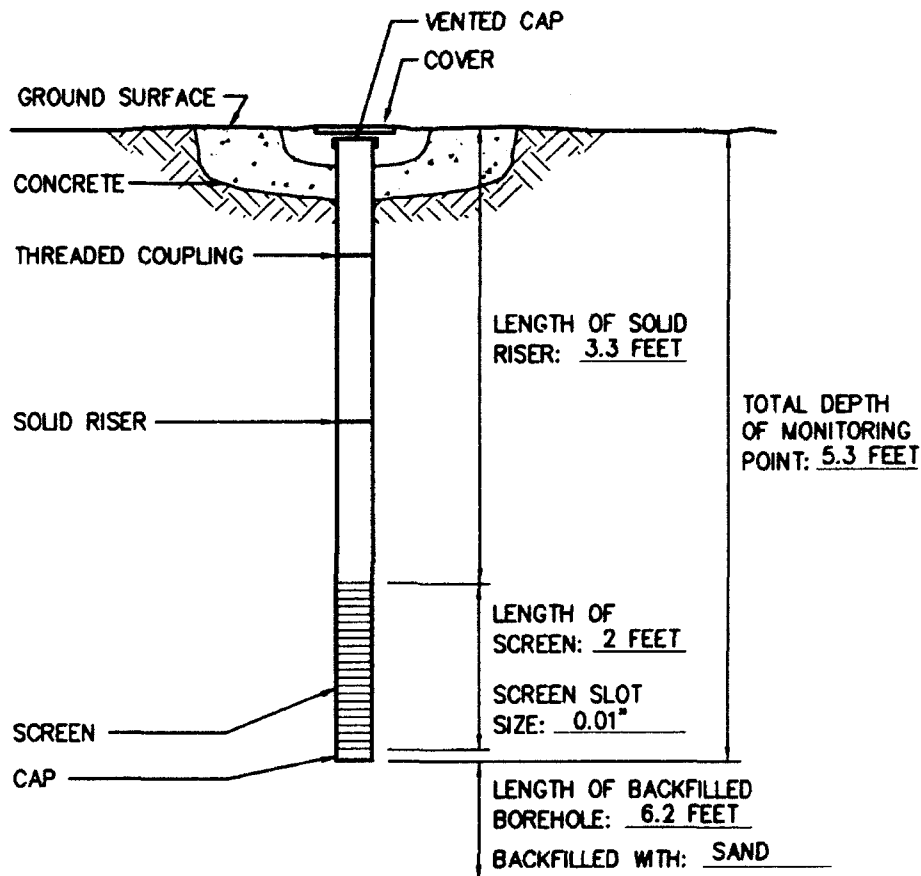


**PARSONS
 ENGINEERING SCIENCE, INC.**

Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-1S
JOB NUMBER 722450.21 INSTALLATION DATE 3/8/95 LOCATION SITE OT-24
DATUM ELEVATION 5.656 FEET ABOVE MSL WELL CASING ELEVATION 5.576 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 3.78 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 5.30 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

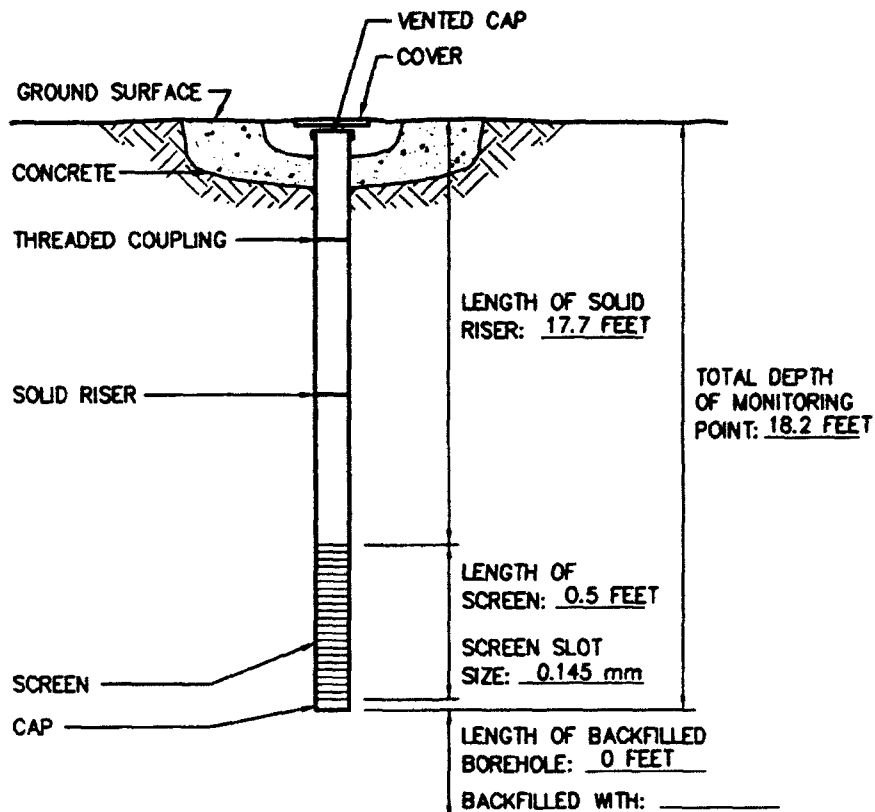


**PARSONS
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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-1D
JOB NUMBER 722450.21 INSTALLATION DATE 3/8/95 LOCATION SITE OT-24
DATUM ELEVATION 5.656 FEET ABOVE MSL WELL CASING ELEVATION TUBE WELL POINT
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.375 STAINLESS STEEL SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.375 INCH TEFLON TUBING BOREHOLE DIAMETER 1 INCH
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

NO WATER LEVEL MEASUREMENTS TAKEN.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

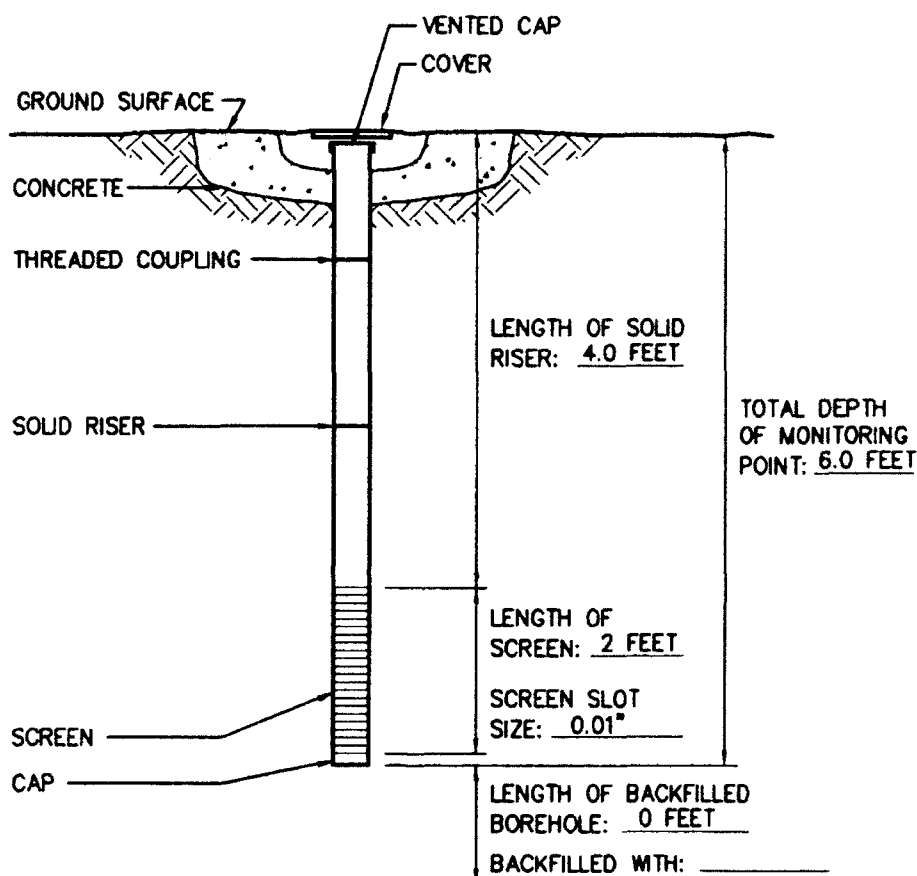


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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-2S
JOB NUMBER 722450.21 INSTALLATION DATE 3/8/95 LOCATION SITE OT-24
DATUM ELEVATION 5.246 FEET ABOVE MSL WELL CASING ELEVATION 4.943 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 3.59 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 6.10 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

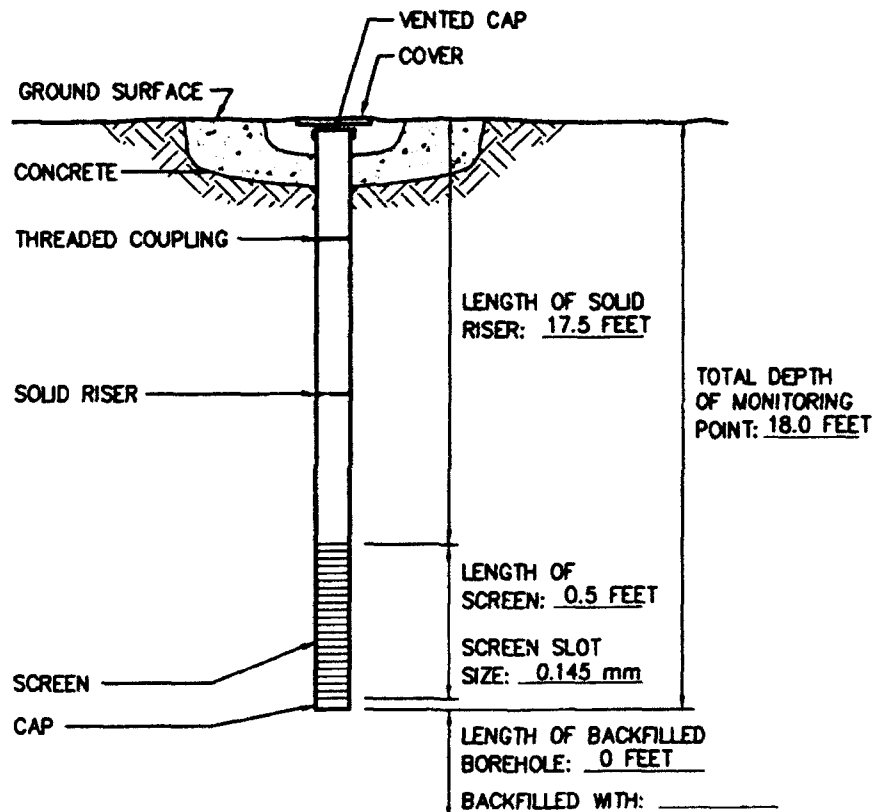


**PARSONS
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MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-2D
JOB NUMBER 722450.21 INSTALLATION DATE 3/8/95 LOCATION SITE OT-24
DATUM ELEVATION 5.246 FEET ABOVE MSL WELL CASING ELEVATION TUBE WELL POINT
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.375 STAINLESS STEEL SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.375 INCH TEFLON TUBING BOREHOLE DIAMETER 1 INCH
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

NO WATER LEVEL MEASUREMENTS TAKEN.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

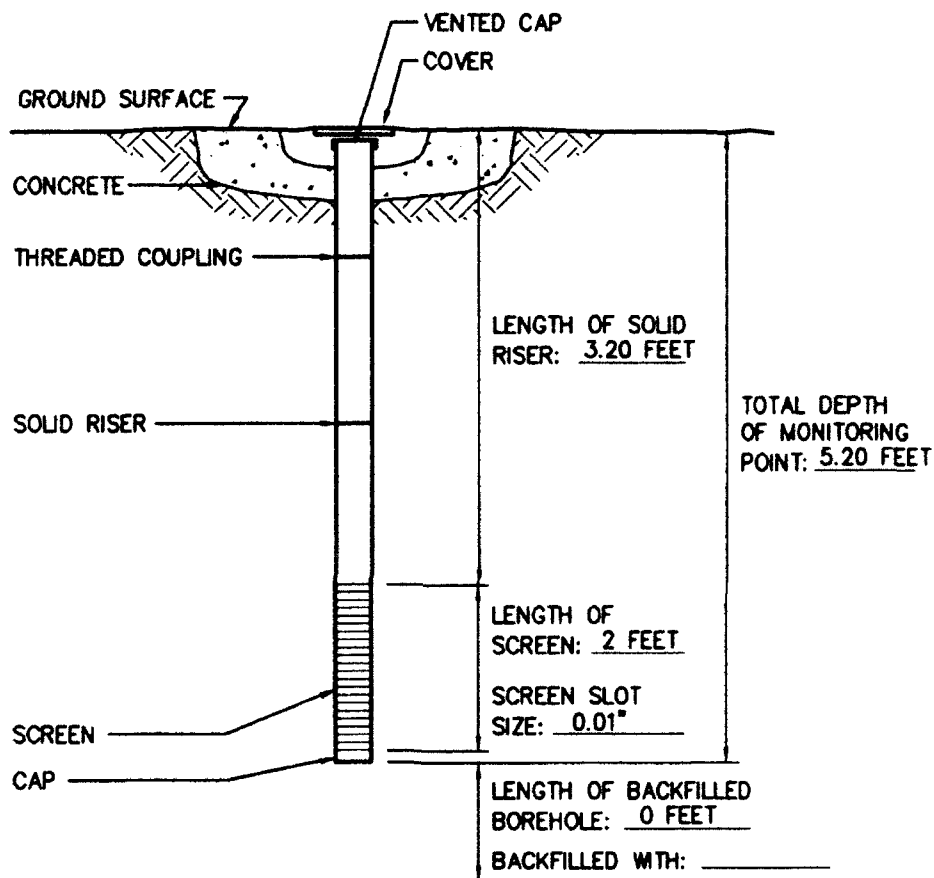


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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-3S
JOB NUMBER 722450.21 INSTALLATION DATE 3/9/95 LOCATION SITE OT-24
DATUM ELEVATION 4.167 FEET ABOVE MSL WELL CASING ELEVATION 3.997 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 2.71 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

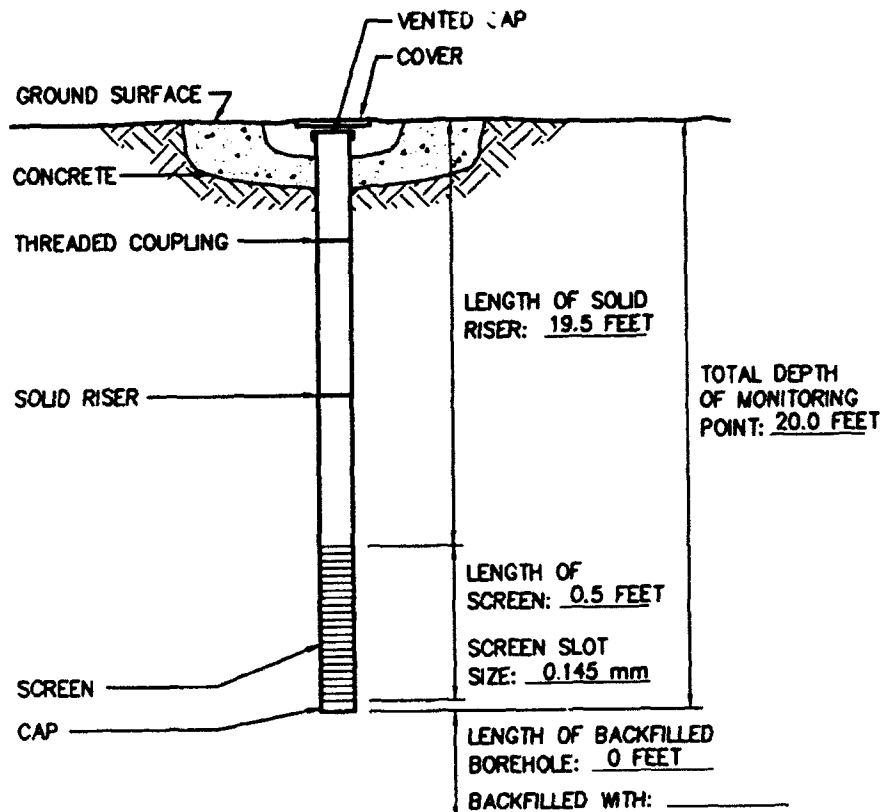


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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-3D
JOB NUMBER 722450.21 INSTALLATION DATE 3/9/95 LOCATION SITE OT-24
DATUM ELEVATION 4.167 FEET ABOVE MSL WELL CASING ELEVATION TUBE WELL POINT
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.375 STAINLESS STEEL SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.375 INCH TEFLON TUBING BOREHOLE DIAMETER 1 INCH
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

NO WATER LEVEL MEASUREMENTS TAKEN.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

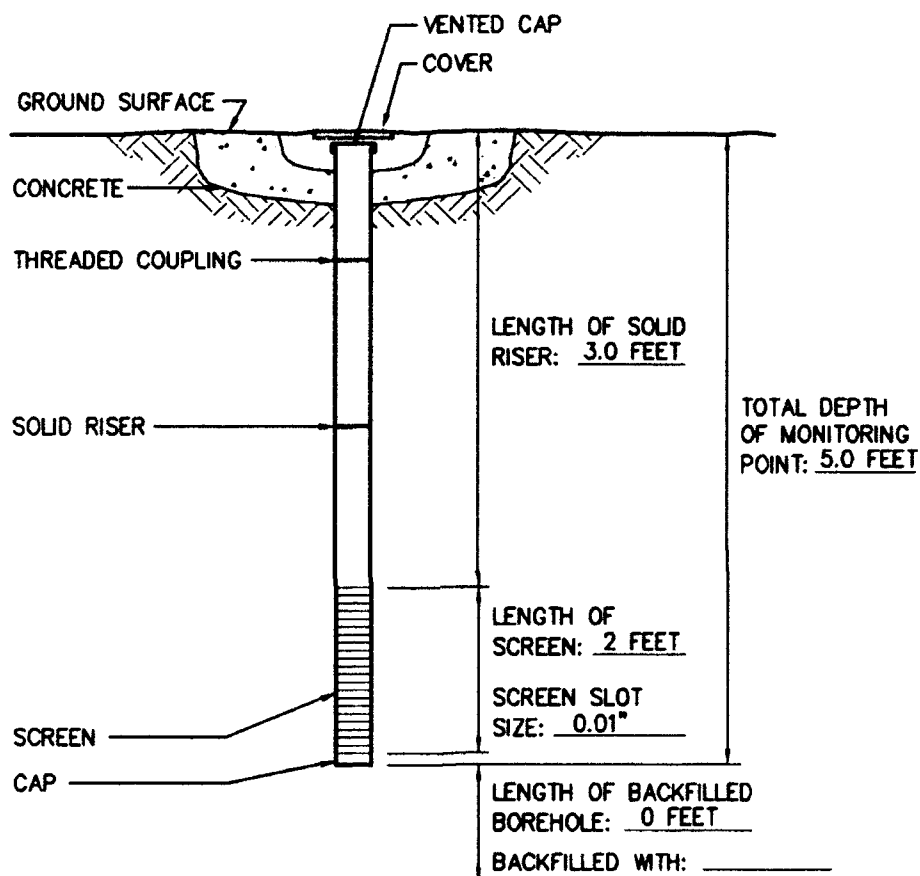


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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-4S
JOB NUMBER 722450.21 INSTALLATION DATE 3/9/95 LOCATION SITE OT-24
DATUM ELEVATION 5.423 FEET ABOVE MSL WELL CASING ELEVATION 5.379 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 3.51 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 4.48 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

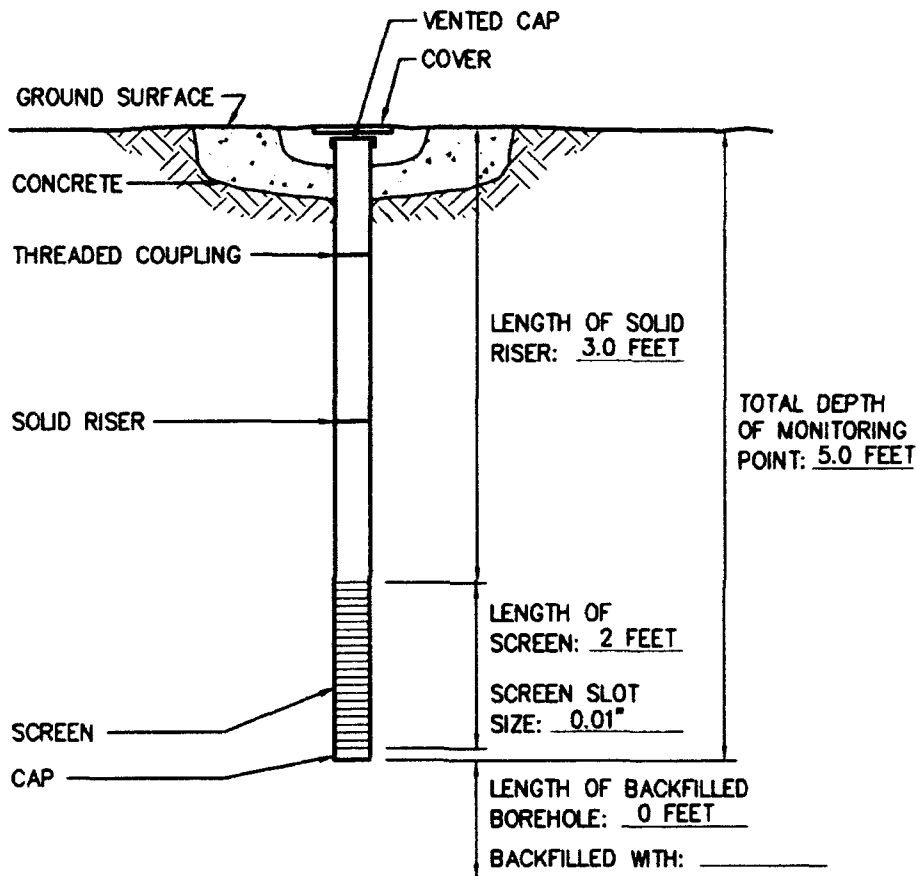


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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-5S
JOB NUMBER 722450.21 INSTALLATION DATE 3/9/95 LOCATION SITE OT-24
DATUM ELEVATION 5.290 FEET ABOVE MSL WELL CASING ELEVATION 5.190 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 3.53 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 4.41 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

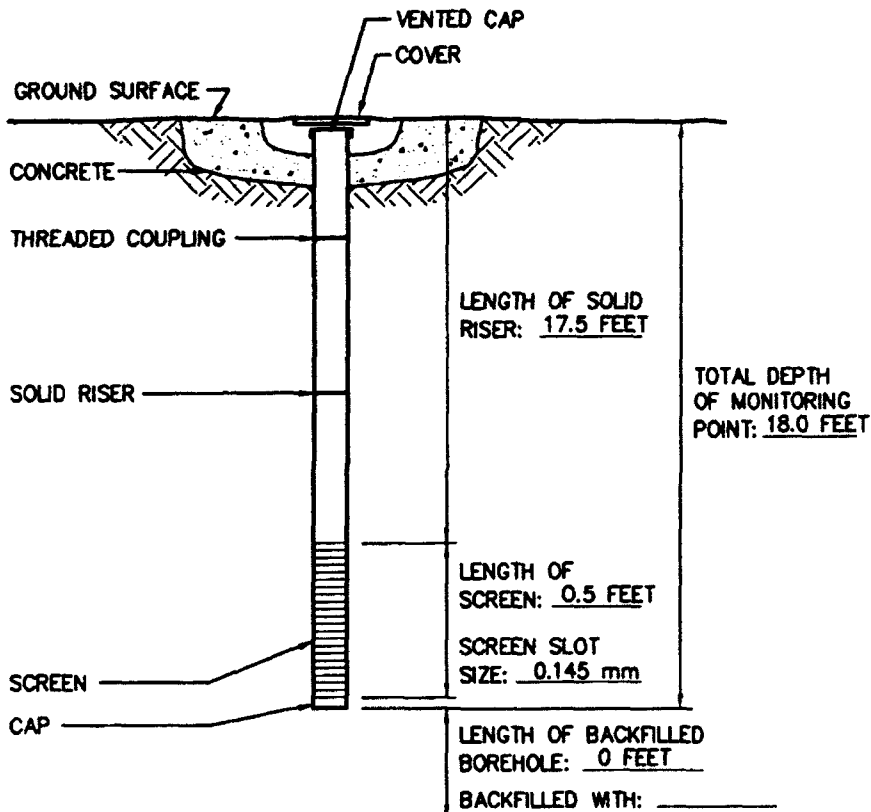


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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-5D
JOB NUMBER 722450.21 INSTALLATION DATE 3/9/95 LOCATION SITE OT-24
DATUM ELEVATION 5.290 FEET ABOVE MSL WELL CASING ELEVATION TUBE WELL PO'NT
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.375 STAINLESS STEEL SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.375 INCH TEFLON TUBING BOREHOLE DIAMETER 1 INCH
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

NO WATER LEVEL MEASUREMENTS TAKEN.

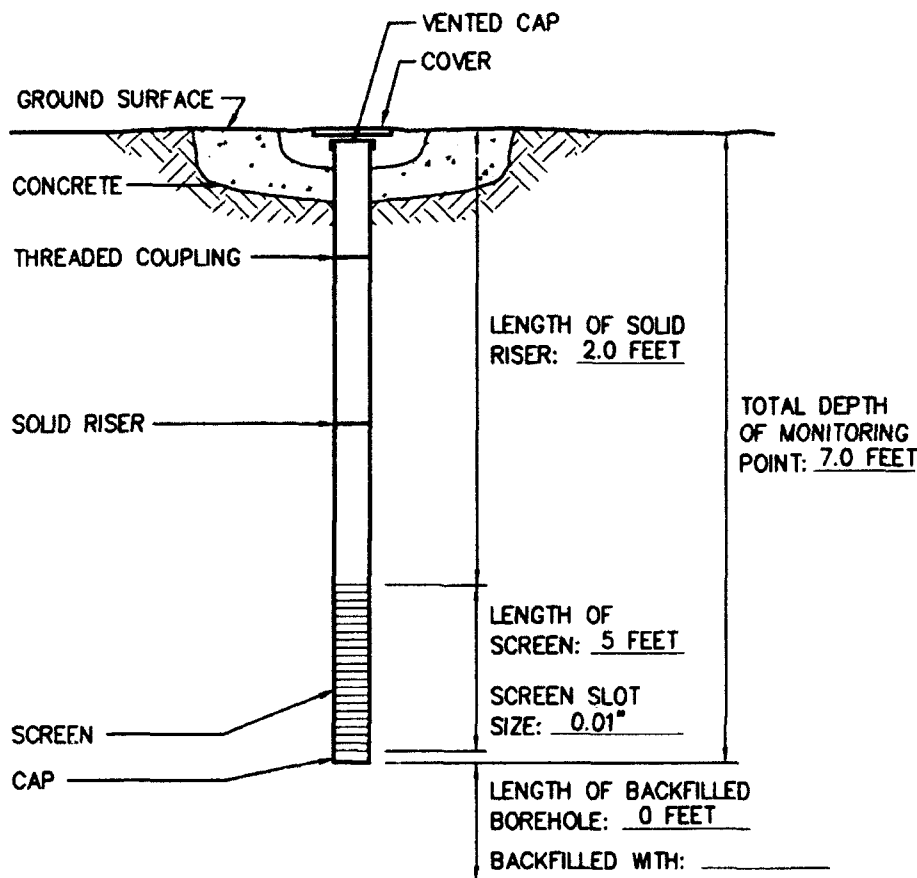
MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

**PARSONS
ENGINEERING SCIENCE, INC.**
Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-6S
JOB NUMBER 722450.21 INSTALLATION DATE 3/10/95 LOCATION SITE OT-24
DATUM ELEVATION 4.596 FEET ABOVE MSL WELL CASING ELEVATION 4.496 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 2.43 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 5.99 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

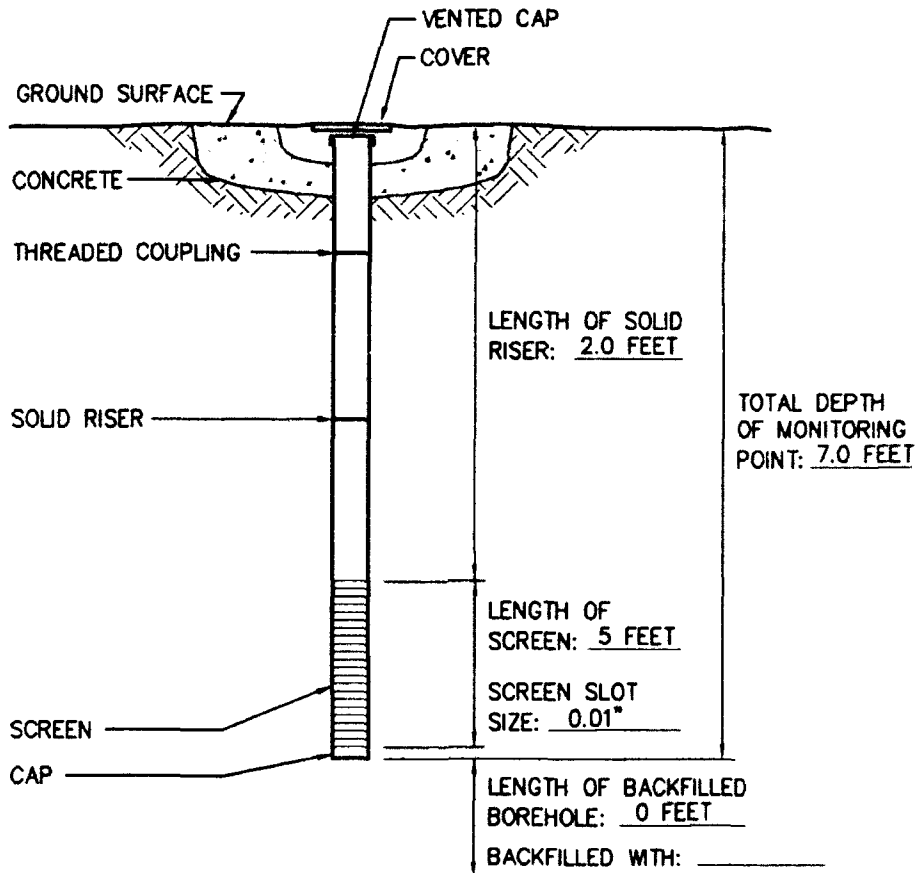


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MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-7S
JOB NUMBER 722450.21 INSTALLATION DATE 3/10/95 LOCATION SITE OT-24
DATUM ELEVATION 4.147 FEET ABOVE MSL WELL CASING ELEVATION 4.000 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 2.38 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 6.12 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

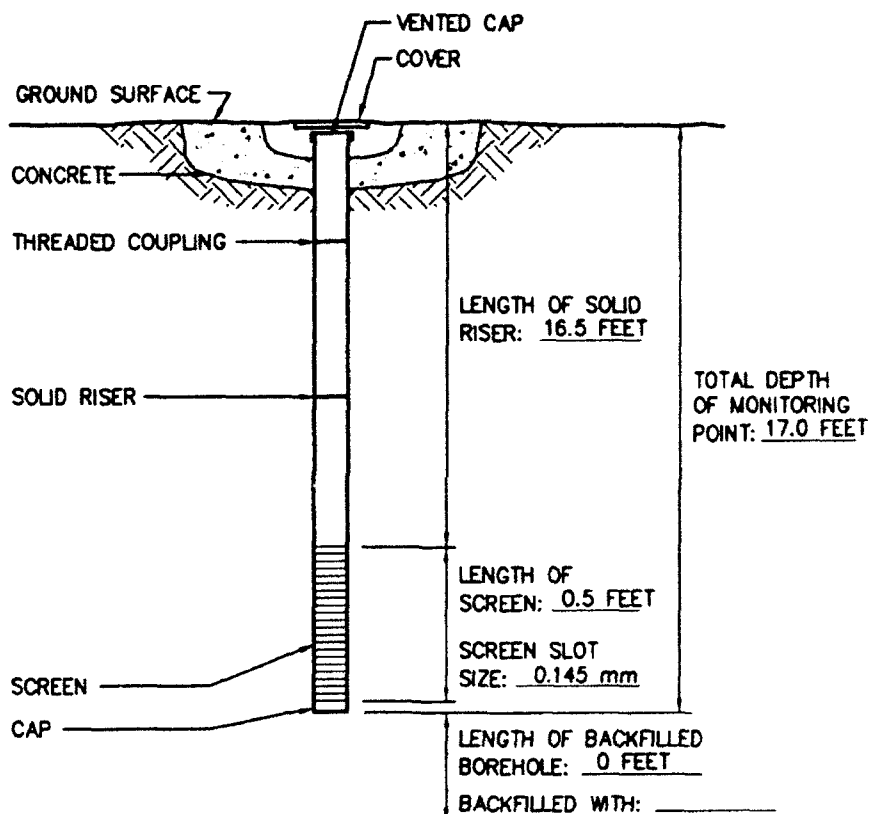


**PARSONS
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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-7D
JOB NUMBER 722450.21 INSTALLATION DATE 3/10/95 LOCATION SITE OT-24
DATUM ELEVATION 4.147 FEET ABOVE MSL WELL CASING ELEVATION TUBE WELL POINT
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.375 STAINLESS STEEL SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.375 INCH TEFLON TUBING BOREHOLE DIAMETER 1 INCH
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

NO WATER LEVEL MEASUREMENTS TAKEN.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

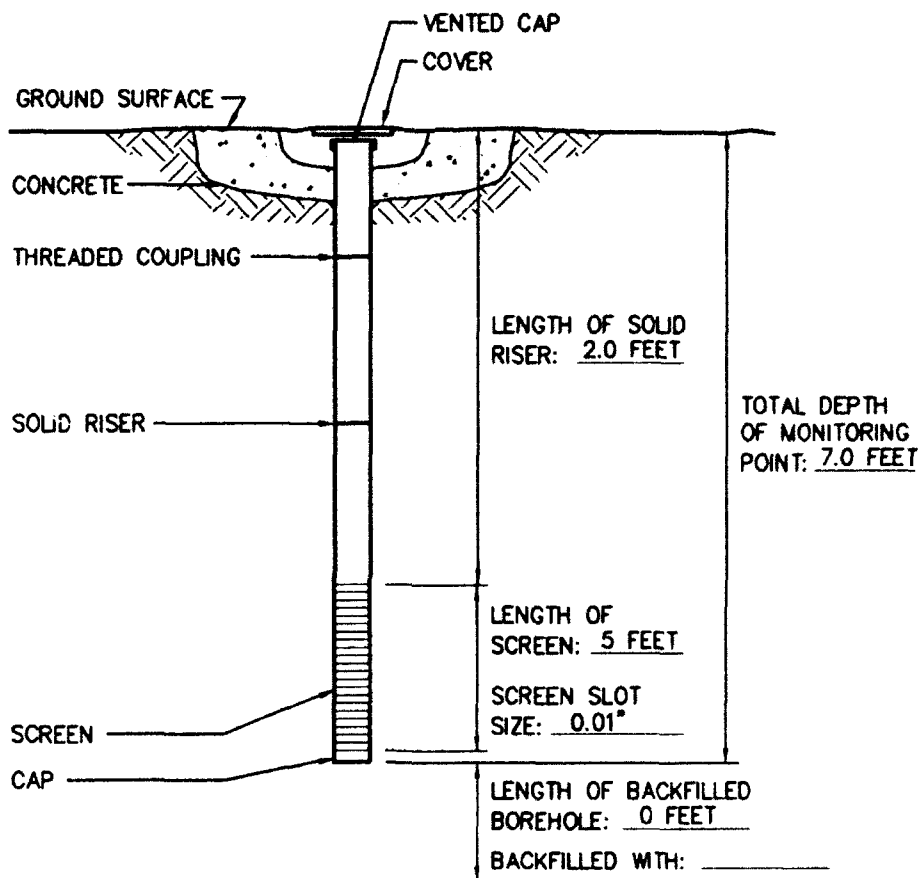


**PARSONS
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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-8S
JOB NUMBER 722450.21 INSTALLATION DATE 3/10/95 LOCATION SITE OT-24
DATUM ELEVATION 4.260 FEET ABOVE MSL WELL CASING ELEVATION 4.154 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 2.55 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 6.01 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

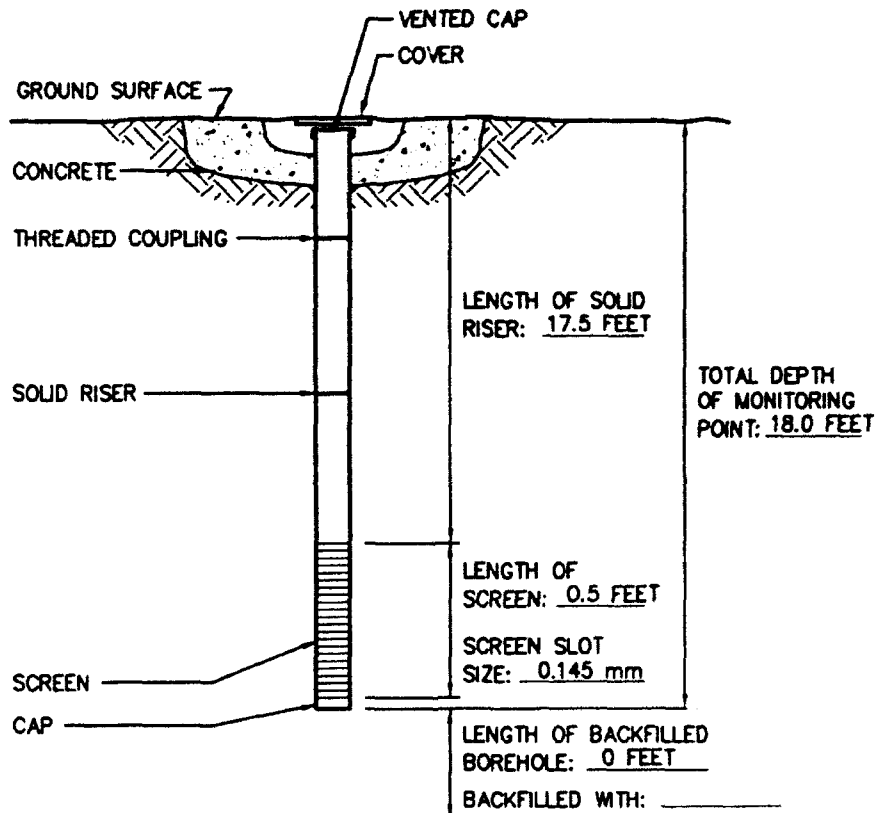


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MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-8D
JOB NUMBER 722450.21 INSTALLATION DATE 3/10/95 LOCATION SITE OT-24
DATUM ELEVATION 4.260 FEET ABOVE MSL WELL CASING ELEVATION TUBE WELL POINT
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.375 STAINLESS STEEL SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.375 INCH TEFLON TUBING BOREHOLE DIAMETER 1 INCH
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

NO WATER LEVEL MEASUREMENTS TAKEN.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

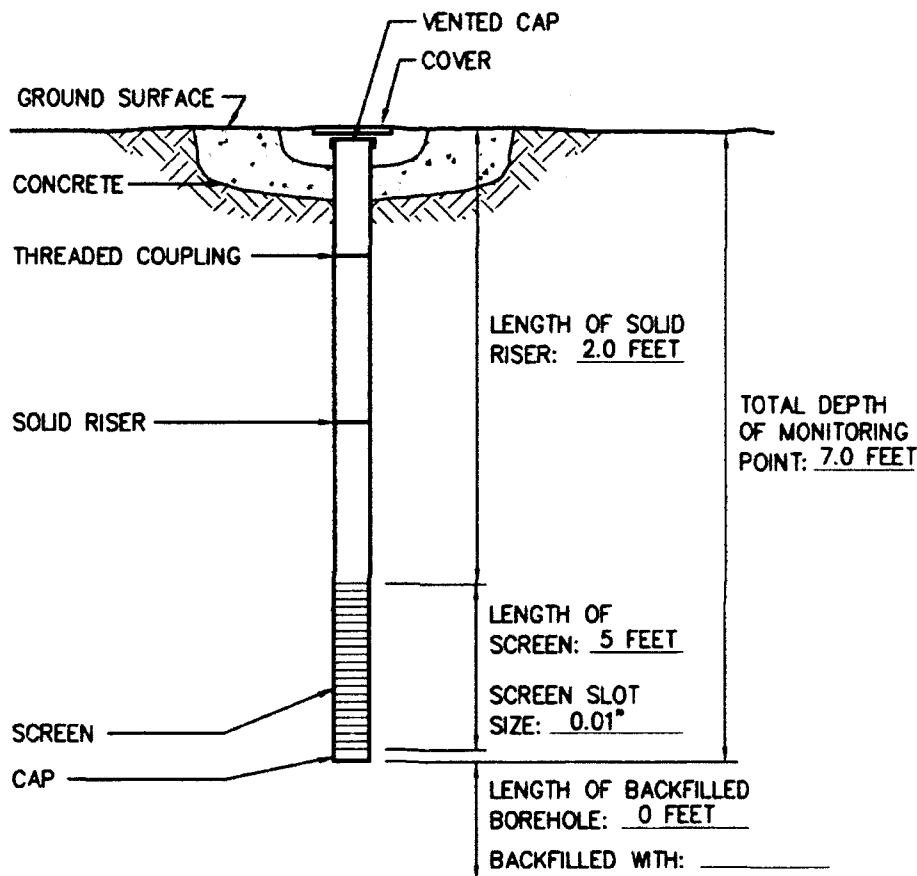


**PARSONS
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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-9S
JOB NUMBER 722450.21 INSTALLATION DATE 3/10/95 LOCATION SITE OT-24
DATUM ELEVATION 3.836 FEET ABOVE MSL WELL CASING ELEVATION 3.596 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 2.25 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 6.10 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

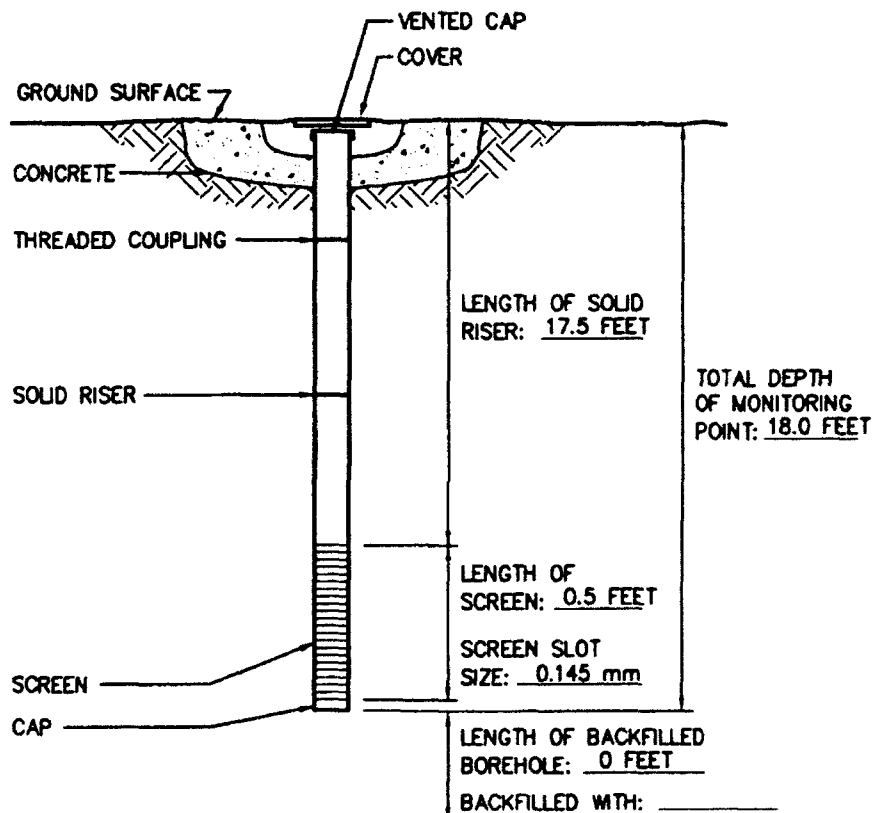


**PARSONS
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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-9D
JOB NUMBER 722450.21 INSTALLATION DATE 3/10/95 LOCATION SITE OT-24
DATUM ELEVATION 3.836 FEET ABOVE MSL WELL CASING ELEVATION TUBE WELL POINT
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.375 STAINLESS STEEL SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.375 INCH TEFLON TUBING BOREHOLE DIAMETER 1 INCH
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

NO WATER LEVEL MEASUREMENTS TAKEN.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

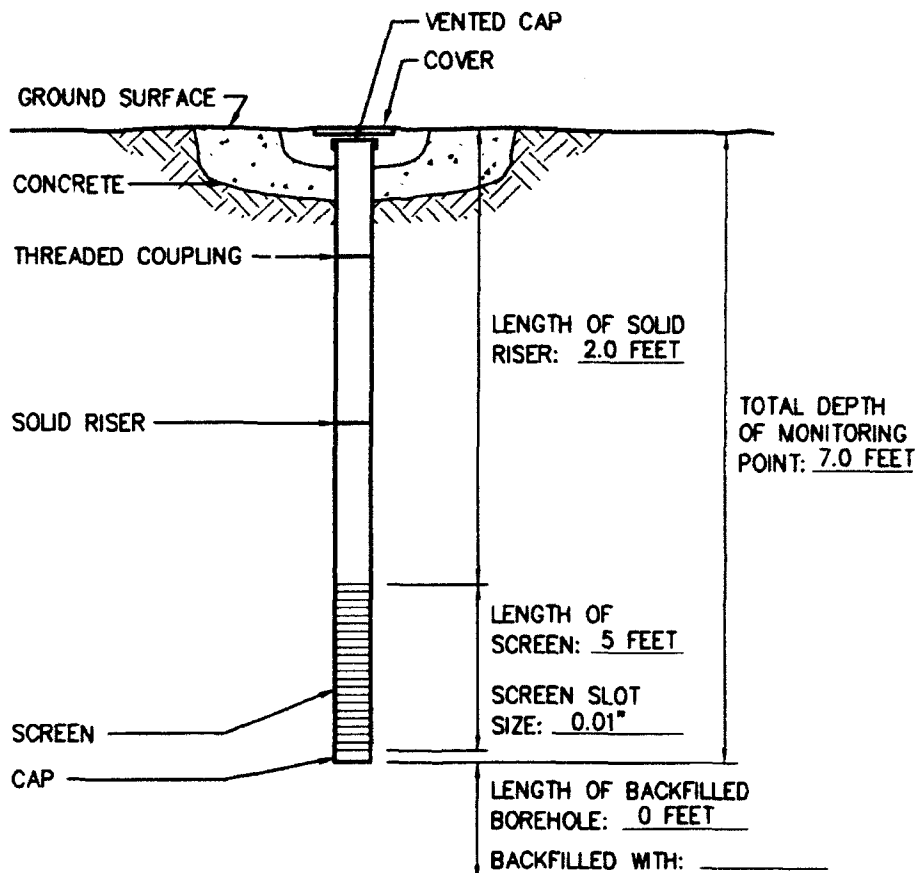


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MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-10S
JOB NUMBER 722450.21 INSTALLATION DATE 3/10/95 LOCATION SITE OT-24
DATUM ELEVATION 4.096 FEET ABOVE MSL WELL CASING ELEVATION 4.196 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.5 INCH PVC SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 0.5 INCH PVC BOREHOLE DIAMETER 2 INCHES
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 2.38 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 6.12 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

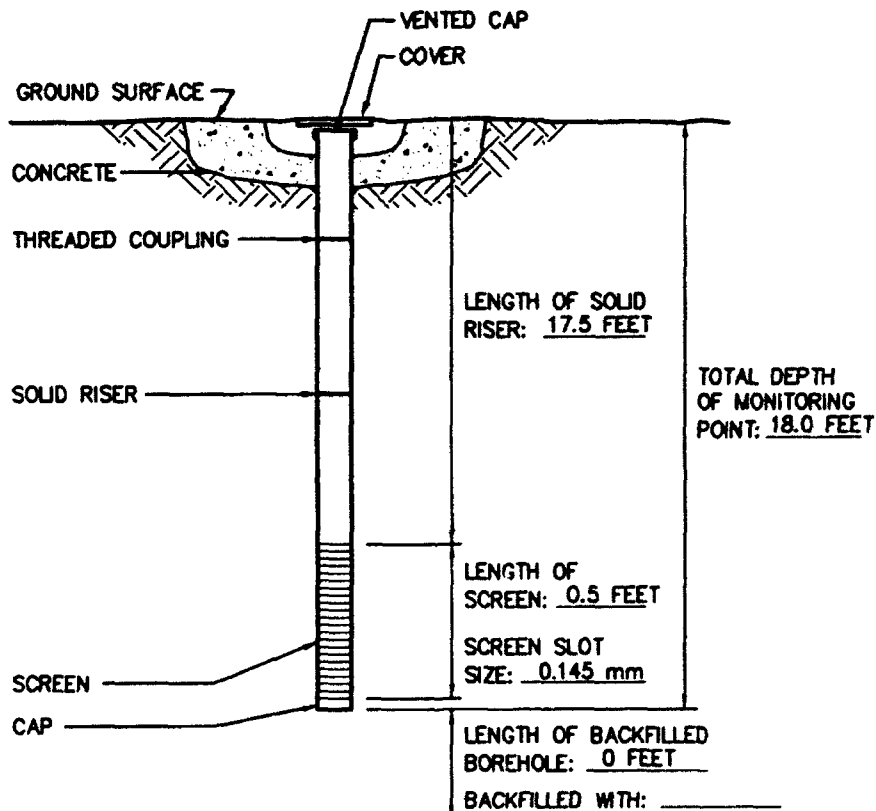


**PARSONS
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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24MP-10D
JOB NUMBER 722450.21 INSTALLATION DATE 3/11/95 LOCATION SITE OT-24
DATUM ELEVATION 4.096 FEET ABOVE MSL WELL CASING ELEVATION TUBE WELL POINT
DATUM FOR WATER LEVEL MEASUREMENT GROUND SURFACE
SCREEN DIAMETER & MATERIAL 0.375 STAINLESS STEEL SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.375 INCH TEFLON TUBING BOREHOLE DIAMETER 1 INCH
GEOPROBE CONTRACTOR PARSONS ENGINEERING SCIENCE ES REPRESENTATIVE KC



(NOT TO SCALE)

NO WATER LEVEL MEASUREMENTS TAKEN.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

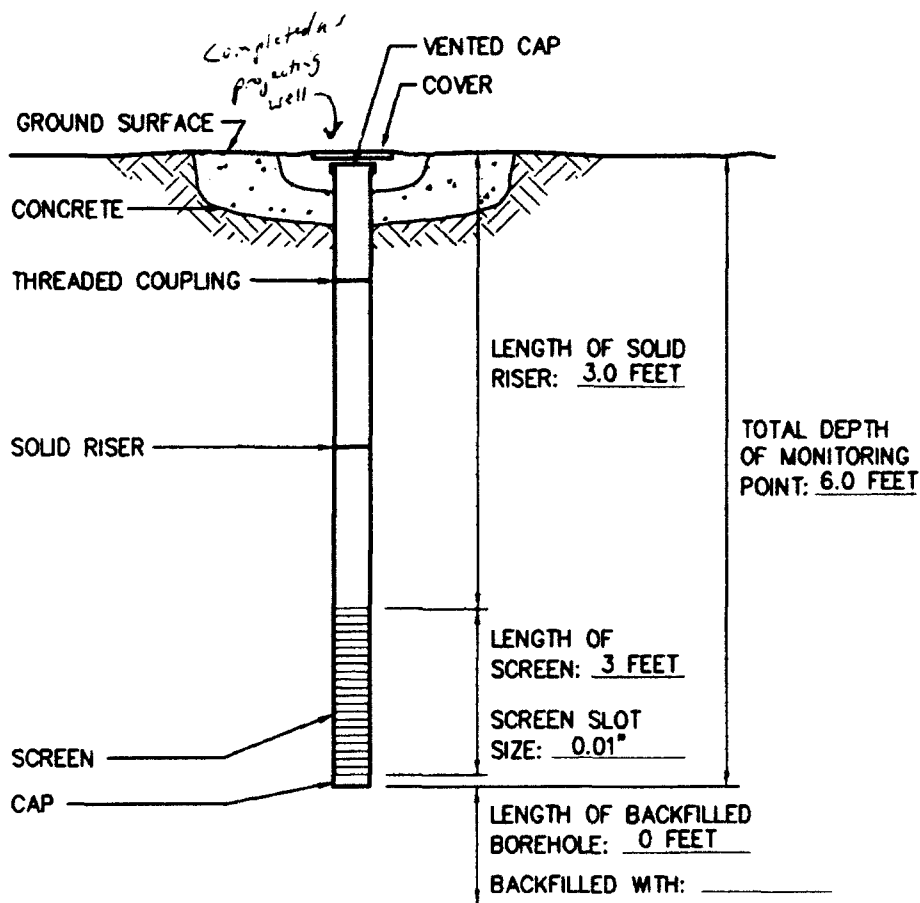


**PARSONS
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Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24PZ-1S
JOB NUMBER 722450.21 INSTALLATION DATE 3/23/95 LOCATION SITE OT-24
DATUM ELEVATION 6.318 FEET ABOVE MSL GROUND SURFACE ELEVATION 4.959 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT TOP OF CASING
SCREEN DIAMETER & MATERIAL 1.5 INCH STEEL SLOT SIZE 0.01 INCH
RISER DIAMETER & MATERIAL 1.5 INCH STEEL BOREHOLE DIAMETER 1.5 INCHES
GEOPROBE CONTRACTOR HAND DRIVEN ES REPRESENTATIVE KC



(NOT TO SCALE)

STABILIZED WATER LEVEL 6.26 FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH 6.00 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

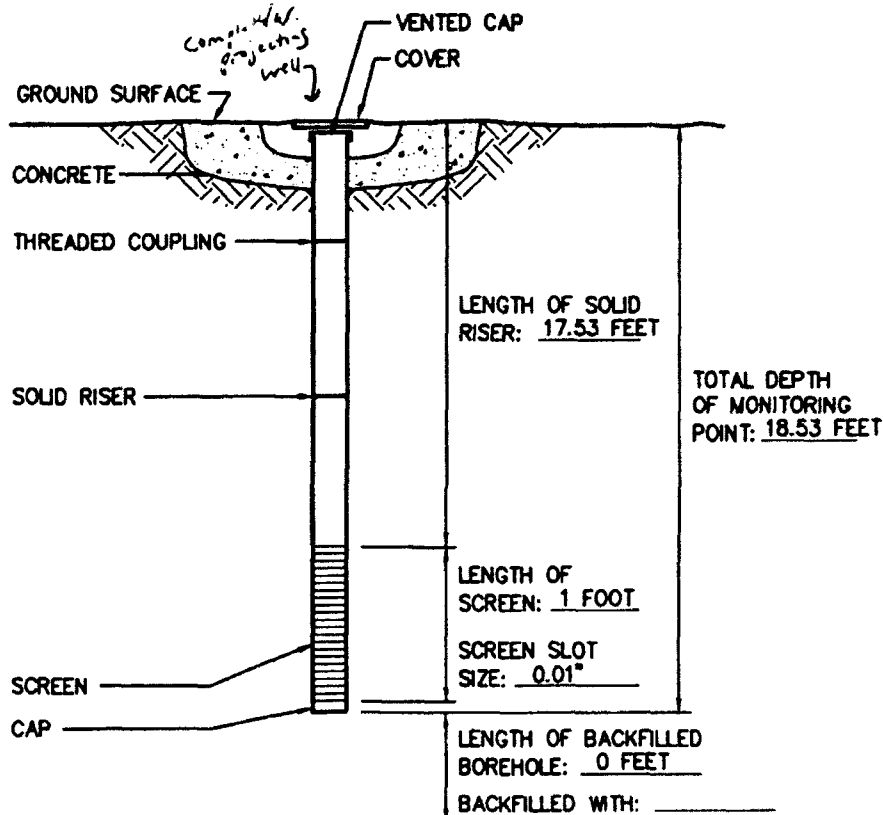


**PARSONS
ENGINEERING SCIENCE, INC.**

Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24PZ-1D
JOB NUMBER 722450.21 INSTALLATION DATE 3/23/95 LOCATION SITE OT-24
DATUM ELEVATION 5.540 FEET ABOVE MSL GROUND SURFACE ELEVATION 4.959 FEET AMSL
DATUM FOR WATER LEVEL MEASUREMENT TOP OF CASING
SCREEN DIAMETER & MATERIAL 1.0 INCH GALVANIZED STEEL SLOT SIZE 0.006"
RISER DIAMETER & MATERIAL 1.0 INCH GALVANIZED STEEL BOREHOLE DIAMETER 1.0 INCH
GEOPROBE CONTRACTOR HAND DRIVEN ES REPRESENTATIVE KC



STABILIZED WATER LEVEL 4.71 FEET
BELOW DATUM.
TOTAL MONITORING POINT DEPTH 18.53 FEET
BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

Site OT-24
Intrinsic Remediation TS
MacDill Air Force Base, Florida

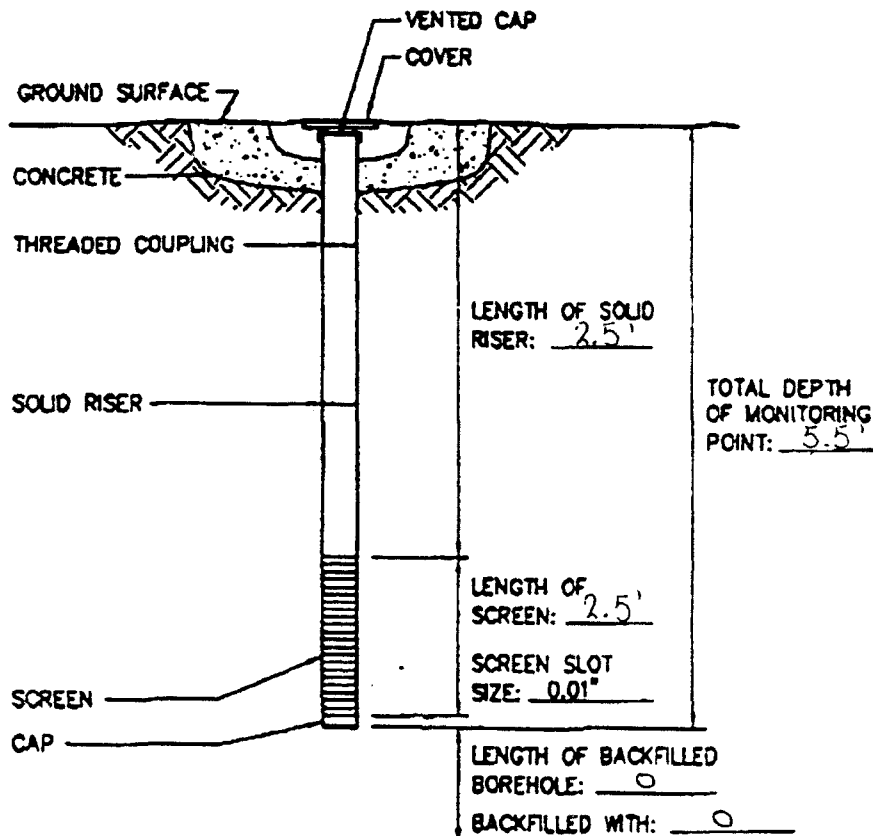


**PARSONS
ENGINEERING SCIENCE, INC.**

Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24P2-25
 JOB NUMBER 722450.21 INSTALLATION DATE 19 JUL 95 LOCATION SITE 0T24
 DATUM ELEVATION 4.16 GROUND SURFACE ELEVATION 4.21
 DATUM FOR WATER LEVEL MEASUREMENT TOC
 SCREEN DIAMETER & MATERIAL 1 1/4" STAINLESS STEEL SCREEN SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 1 1/4" GALV STEEL BOREHOLE DIAMETER 1.66"
 CONTRACTOR Parsons ES ES REPRESENTATIVE Bob Sorvillo



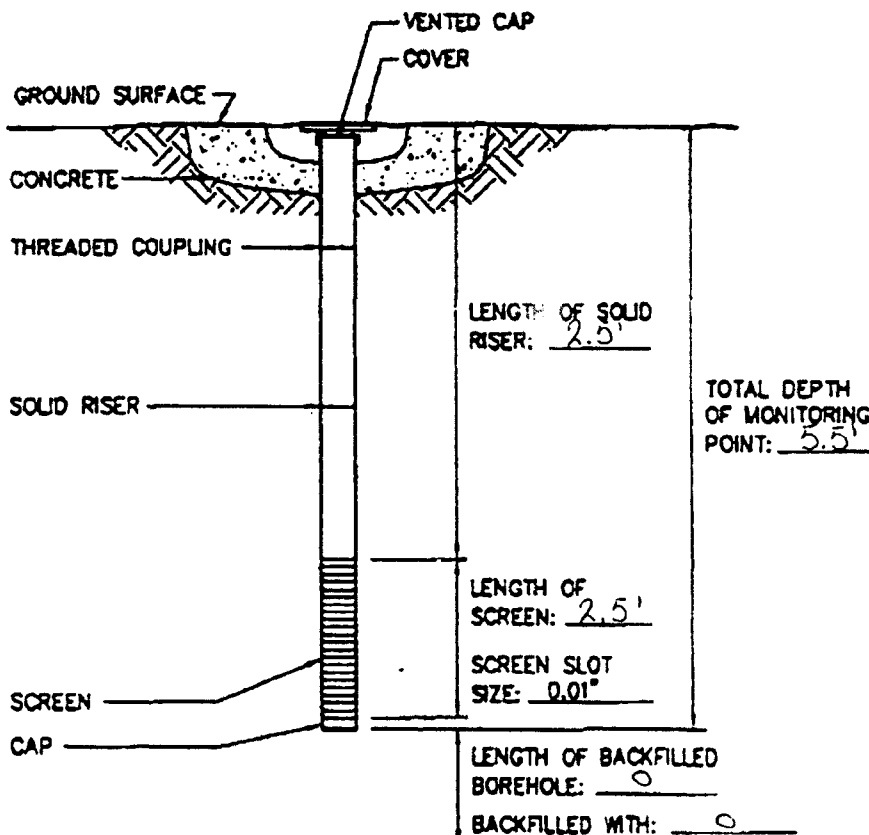
STABILIZED WATER LEVEL 1.60 FEET
 BELOW DATUM. (8/11/95)
 TOTAL MONITORING POINT DEPTH 5.5 FEET
 BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

SITE 0T24
 Intrinsic Remediation TS
 MacDill Air Force Base, Florida
ENGINEERING-SCIENCE, INC.
 Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24P2-35
 JOB NUMBER 722450.21 INSTALLATION DATE 19-Jul-95 LOCATION SITE 6T24
 DATUM ELEVATION 3.75 GROUND SURFACE ELEVATION 3.73
 DATUM FOR WATER LEVEL MEASUREMENT TGC
 SCREEN DIAMETER & MATERIAL 1 1/4" STAINLESS STEEL SCREEN SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 1 1/4" GALV STEEL BOREHOLE DIAMETER 1.66"
 CONTRACTOR PURSON & SONS ES REPRESENTATIVE Rob Sorvillo



(NOT TO SCALE)

STABILIZED WATER LEVEL 1.47 FEET
 BELOW DATUM. (8/14/95)
 TOTAL MONITORING POINT DEPTH 5.5' FEET
 BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

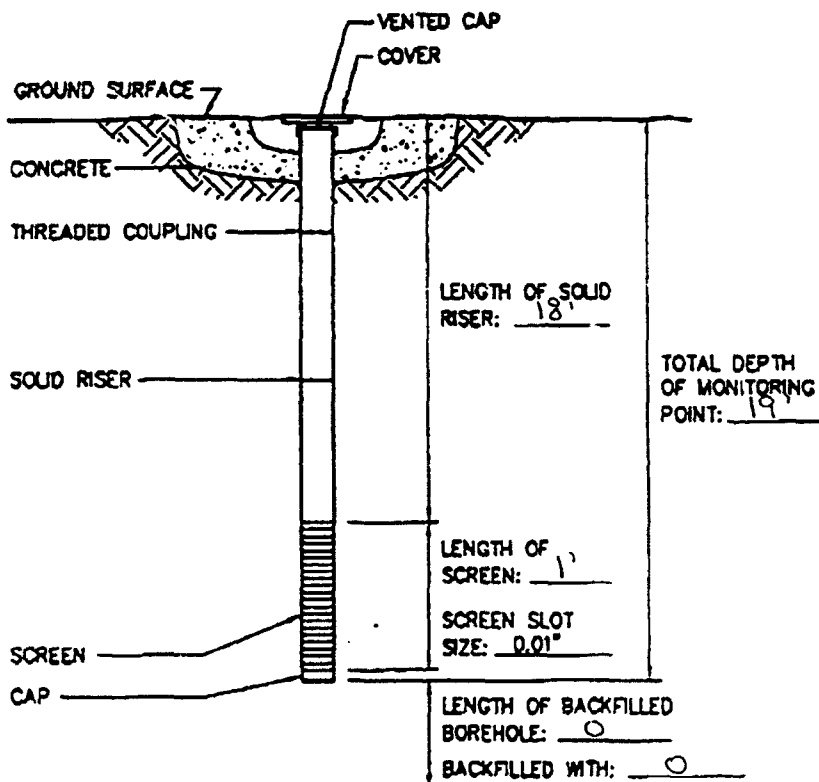
SITE 6T24
 Intrinsic Remediation TS
 MacDill Air Force Base, Florida

ENGINEERING-SCIENCE, INC.

Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24PZ-3D
 JOB NUMBER 722450.21 INSTALLATION DATE 20-JUL-95 LOCATION SITE OT 24
 DATUM ELEVATION 3.82 GROUND SURFACE ELEVATION 3.75
 DATUM FOR WATER LEVEL MEASUREMENT TOC
 SCREEN DIAMETER & MATERIAL 1" STAINLESS STEEL SCREEN SLOT SIZE 0.006"
 RISER DIAMETER & MATERIAL 1" GALV STEEL BOREHOLE DIAMETER 1.25"
 CONTRACTOR PARSONS ES ES REPRESENTATIVE Bob Surville



(NOT TO SCALE)

STABILIZED WATER LEVEL FEET
 BELOW DATUM.
 TOTAL MONITORING POINT DEPTH 19' FEET
 BELOW DATUM.

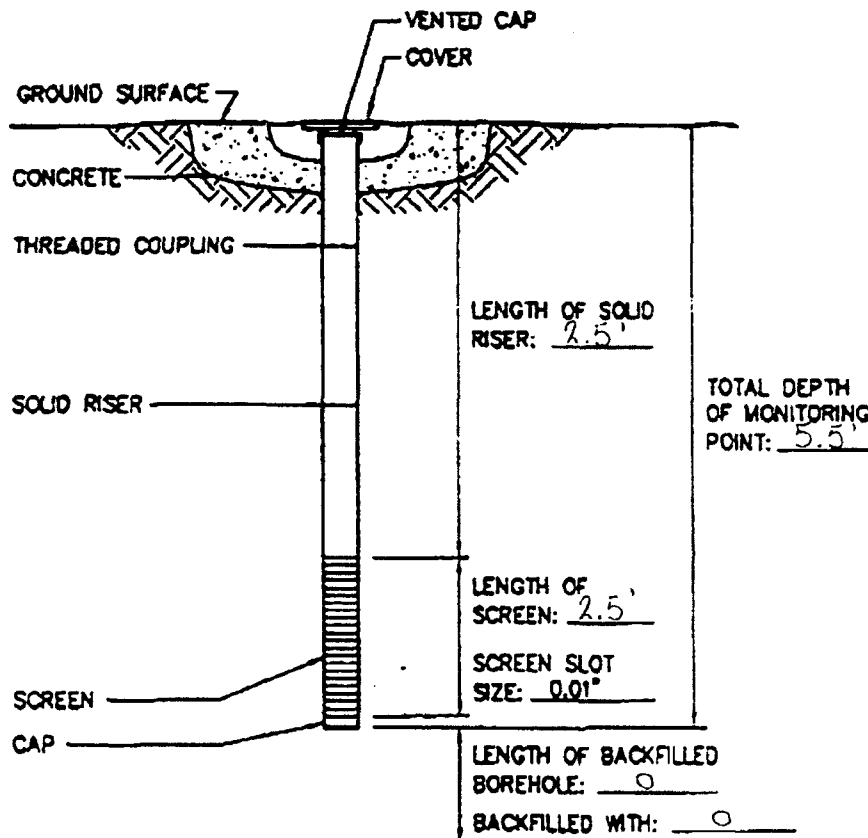
MONITORING POINT INSTALLATION RECORD

SITE OT 24
 Intrinsic Remediation TS
 MacDill Air Force Base, Florida

ENGINEERING-SCIENCE, INC.
 Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24P2-45
 JOB NUMBER 722450.21 INSTALLATION DATE 19-JUL-95 LOCATION SITE #T24
 DATUM ELEVATION 4.43 GROUND SURFACE ELEVATION 4.46
 DATUM FOR WATER LEVEL MEASUREMENT TOC
 SCREEN DIAMETER & MATERIAL 1 1/4" STAINLESS STEEL SCREEN SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 1 1/4" GALV STEEL BOREHOLE DIAMETER 1.66"
 CONTRACTOR PARSONS E&S ES REPRESENTATIVE BOB SURVILLIO



(NOT TO SCALE)

STABILIZED WATER LEVEL 1.79 FEET
 BELOW DATUM. (8/11/95)
 TOTAL MONITORING POINT DEPTH 5.5' FEET
 BELOW DATUM.

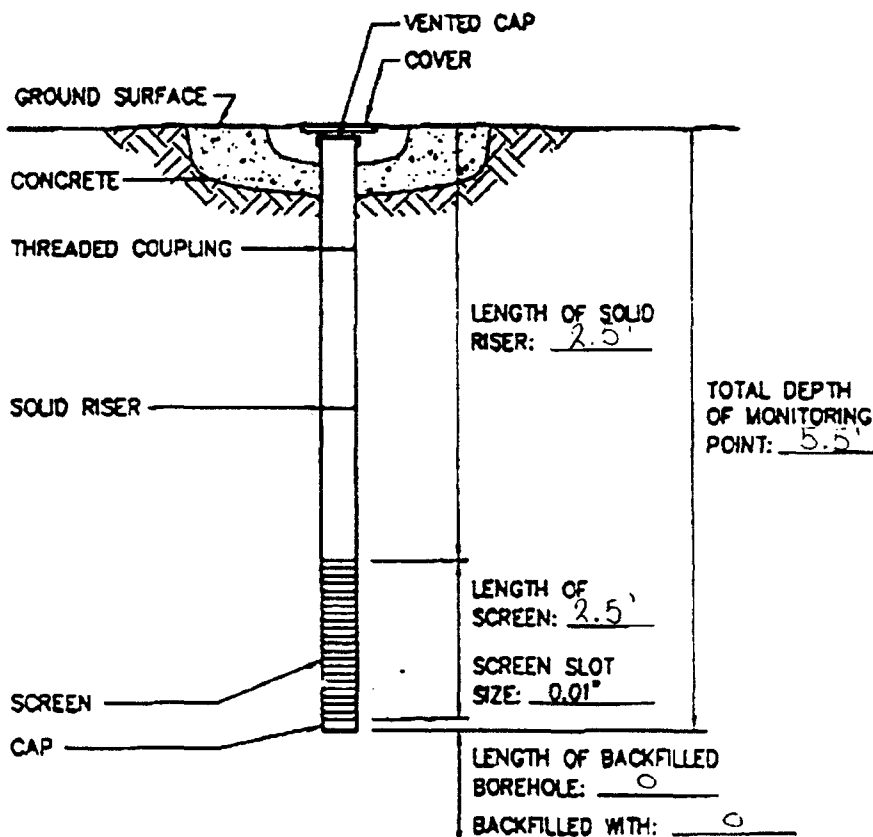
MONITORING POINT INSTALLATION RECORD

SITE #T24
 Intrinsic Remediation TS
 MacDill Air Force Base, Florida

ENGINEERING-SCIENCE, INC.
 Denver, Colorado

MONITORING POINT INSTALLATION RECORD

JOB NAME MACDILL AIR FORCE BASE MONITORING POINT NUMBER 24P2-55
 JOB NUMBER 722450.21 INSTALLATION DATE 19-JUL-95 LOCATION SITE 0T24
 DATUM ELEVATION 4.40 GROUND SURFACE ELEVATION 7.53
 DATUM FOR WATER LEVEL MEASUREMENT TOC
 SCREEN DIAMETER & MATERIAL 1 1/4" STAINLESS STEEL SCREEN SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 1 1/4" GALV STEEL BOREHOLE DIAMETER 1 1/4" / .66"
 CONTRACTOR PARSONS ES ES REPRESENTATIVE Bob Sorvillo



(NOT TO SCALE)

STABILIZED WATER LEVEL 2.16 FEET
 BELOW DATUM. (8/12/95)
 TOTAL MONITORING POINT DEPTH 5.5 FEET
 BELOW DATUM.

MONITORING POINT INSTALLATION RECORD

SITE 0T24
 Intrinsic Remediation TS
 MacDill Air Force Base, Florida

ENGINEERING-SCIENCE, INC.

Denver, Colorado

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24MP-1D

Job Name: MacDill AFB
 By KC/MV Date 7/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 11:55

Water Level:

Total Depth of Well:

Water Characteristics

Color sandy muddy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material slight green
 pH 7.4 Temperature (°F °C) 25.4°C
 Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed

~ 2 gal

DO 0.47 mg/L

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): 12:35

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color _____ Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F °C) 25.6°C
 Specific Conductance (µS/cm) _____

Comments:

Monitoring Point Type Shallow / Deep

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP-1 S

Job Name: MacDill AFB
 By KC/MV Date 3/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 12:37

Water Level:

Total Depth of Well:

Water Characteristics

Color DARK BROWN Clear Cloudy (No light passing thru)
 Odor: None Weak Moderate Strong (sulfurous)
 Any Films or Immiscible Material Shale
 pH Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)
 Specific Conductance ($\mu\text{S}/\text{cm}$)

Smelly, muddy

Interim Water Characteristics

Gallons Removed

pH

Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)

Specific Conductance ($\mu\text{S}/\text{cm}$)

Post-Development Information

Time (Finish): 1410

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material
 pH Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)
 Specific Conductance ($\mu\text{S}/\text{cm}$)

Comments:

Monitoring Point Type Shallow / Deep

Left well undeveloped see field notes

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24MP-25

Job Name: MacDill AFB
 By KC/MV Date 3/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 10:50

Water Level:

Total Depth of Well:

Water Characteristics

Color DARK Brown Clear Cloudy (no light passing thru)
 Odor: None Weak Moderate Strong (sulfurous)
 Any Films or Immiscible Material Sham
 pH 7.5 Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 25.5
 Specific Conductance ($\mu\text{S}/\text{cm}$)

Interim Water Characteristics

Gallons Removed 4 gal

D.O. 0.06 mg/L

pH

Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)

Specific Conductance ($\mu\text{S}/\text{cm}$)

Post-Development Information

Time (Finish): 11:45

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Brown Clear Cloudy Very little light passing thru
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material
 pH 7.4 Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 25.4
 Specific Conductance ($\mu\text{S}/\text{cm}$)

Comments:

Monitoring Point Type Shallow / Deep

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP-2D

Job Name: MacDill AFB
 By KC/MV Date 3/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 10:00

Water Level:

Total Depth of Well:

Water Characteristics

Color dirty & sandy Clear Cloudy
 Odor: None Weak Moderate Strong (sulfurous)
 Any Films or Immiscible Material _____
 pH _____ Temperature ($^{\circ}$ F $^{\circ}$ C) 25.1
 Specific Conductance (μ S/cm) _____

Interim Water Characteristics

Gallons Removed

≈ 1.5 gal

D.O. 0.40 mg/L

pH

Temperature ($^{\circ}$ F $^{\circ}$ C)

Specific Conductance (μ S/cm)

Post-Development Information

Time (Finish): 10:50

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color _____ Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature ($^{\circ}$ F $^{\circ}$ C) 25.1
 Specific Conductance (μ S/cm) _____

Comments:

Monitoring Point Type Shallow / Deep

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP-3D

Job Name: MacDill AFB
 By KC/MV Date 3/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 1427

Water Level:

Total Depth of Well:

Water Characteristics

Color Sandy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F °C) 25.9
 Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed ≈ 1 gal

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): 1445

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Sandy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F °C) 26.8°C
 Specific Conductance (µS/cm) _____

Comments:

Monitoring Point Type Shallow Deep

DO stable, 1.20 @ 0.55 mg/L

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
Location Site OT-24
Well Number MP-35

Job Name: MacDill AFB
By KC/MV Date 3/14/95
Measurement Datum TOC

Pre-Development Information

Time (Start): 1450

Water Level:

Total Depth of Well:

Water Characteristics

Color DARK BROWN Clear Cloudy
Odor: None Weak Moderate Strong
Any Films or Immiscible Material
pH Temperature (°F °C) 24.4
Specific Conductance (µS/cm)

Interim Water Characteristics

Gallons Removed ≈ 4 gal

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): 1521

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Clear Cloudy
Odor: None Weak Moderate Strong
Any Films or Immiscible Material
pH Temperature (°F °C) 22.2
Specific Conductance (µS/cm)

Comments:

Monitoring Point Type Shallow / Deep

L.O. stabilized @ 0.27 mg/L

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24-MP-45

Job Name: MacDill AFB
 By KC /MV Date 3/15/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 08:45

Water Level:

Total Depth of Well:

Water Characteristics

Color DARK BROWN Clear Cloudy - muddy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material None
 pH 7.2 Temperature (°F °C) 50.6
 Specific Conductance (µS/cm) 206

Interim Water Characteristics

Gallons Removed

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): 10:45

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Cloudy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material Slight Sheen
 pH 7.3 Temperature (°F °C) 53.6
 Specific Conductance (µS/cm) 236

Comments:

Monitoring Point Type Shallow / Deep

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP-5D

Job Name: MacDill AFB
 By KC/MV Date 3/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 0800

Water Level:

Total Depth of Well:

Water Characteristics

Color yellow Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material yes
 pH 7.0 Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 24.0
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Interim Water Characteristics

Gallons Removed ~ 6 gal.

D.O. 0.35 mg/L

(sensitivity for
 calib. of D.O.
 probe may
 not be correct
 @ 0.2)

pH

Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 24.0

Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Post-Development Information

Time (Finish):

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color _____ Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) _____
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Comments:

Monitoring Point Type Shallow / Deep

MONITORING POINT DEVELOPMENT RECORD

Page__ of__

Job Number: 722450.21
Location Site OT-24
Well Number 24 MP-SS

Job Name: MacDill AFB
By KC/MV Date 3/14/95
Measurement Datum TOC

Pre-Development Information

Time (Start):

Water Level:

Total Depth of Well:

Water Characteristics

Color _____ Clear _____ Cloudy _____
Odor: None _____ Weak _____ Moderate _____ Strong _____
Any Films or Immiscible Material _____
pH _____ Temperature (°F °C) _____
Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed ~ 2 gal

pH

Temperature (°F °C) 23.3°C

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish):

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color _____ Clear _____ Cloudy _____
Odor: None _____ Weak _____ Moderate _____ Strong _____
Any Films or Immiscible Material _____
pH _____ Temperature (°F °C) _____
Specific Conductance (µS/cm) _____

Comments:

Monitoring Point Type Shallow / Deep

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP-65

Job Name: MacDill AFB
 By KC/MV Date 3/15/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 07:50

Water Level:

Total Depth of Well:

Water Characteristics

Color Brown, muddy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material None
 pH Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 20.2
 Specific Conductance ($\mu\text{S}/\text{cm}$)

Interim Water Characteristics

Gallons Removed ~2 Gallons

pH

Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)

Specific Conductance ($\mu\text{S}/\text{cm}$)

Post-Development Information

Time (Finish): 08:15

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Light Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material No
 pH Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 20.6
 Specific Conductance ($\mu\text{S}/\text{cm}$)

Comments:

Monitoring Point Type Shallow / Deep

D.O. STABILIZED AT 0.11 mg/l

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21

Job Name: MacDill AFB

Location Site OT-24

By KC / MV

Date 3/14/95

Well Number 24 MP - 7D

Measurement Datum TOC

Pre-Development Information

Time (Start): 1635

Water Level:

Total Depth of Well:

Water Characteristics

Color "light" sandy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F) (9) 24.2 °C
 Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed ≈ 1.5 gal

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): 1710

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F °C) 23.4
 Specific Conductance (µS/cm) _____

Comments:

Monitoring Point Type Shallow / Deep

D.O. stabilized @ 0.10 mg/L

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP-75

Job Name: MacDill AFB
 By KC /MV Date 3/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 1711

Water Level:

Total Depth of Well:

Water Characteristics

Color Brown, sandy Clear Cloudy (No light passing thru)
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F) 61 (°C) 16.2
 Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed ~ 2 gal

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish):

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color sandy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F) 61 (°C) 16.2
 Specific Conductance (µS/cm) _____

Comments:

Monitoring Point Type Shallow / Deep

Do not analyze e 0/6 mg/L

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP-8D

Job Name: MacDill AFB
 By KC/MV Date 3/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 1530

Water Level:

Total Depth of Well:

Water Characteristics

Color Muddy, sandy Clear Cloudy (N. light passing thru)
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F) 23.8 (°C) _____
 Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed ≈ 1.5 gal

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): 1550

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color sandy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F) 24.2 (°C) _____
 Specific Conductance (µS/cm) _____

Comments:

Monitoring Point Type Shallow Deep

D.O. stabilized @ 0.27 mg/L

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24wp-85

Job Name: MacDill AFB
 By KC/MV Date 3/14/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 1555

Water Level:

Total Depth of Well:

Water Characteristics

Color Dark Brown, muddy Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 23.6
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Interim Water Characteristics

Gallons Removed ~ 2.5 gal

pH

Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)

Specific Conductance ($\mu\text{S}/\text{cm}$)

Post-Development Information

Time (Finish): 1615

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color _____ Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 22.1
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Comments:

Monitoring Point Type Shallow / Deep

D.O. stabilized @ 0.09 mg/L

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP 9D

Job Name: MacDill AFB
 By KC/MV Date 3/2/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 16:30

Water Level:

Total Depth of Well:

Water Characteristics

Color light Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material film
 pH _____ Temperature (°F °C) _____
 Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed approximately 2 gallons

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): 17:00

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color to clear Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material slight film
 pH _____ Temperature (°F °C) 23.4
 Specific Conductance (µS/cm) _____

Comments:

Monitoring Point Type Shallow / Deep

1.6 standard at 0.40 mg/l

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site QT-24
 Well Number 24 MP-95

Job Name: MacDill AFB
 By KC/MV Date 2/3/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 17:00

Water Level:

Total Depth of Well:

Water Characteristics

Color Dark Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material 4.7 in
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) _____
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Interim Water Characteristics

Gallons Removed approximately 2 gallons

pH

Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)

Specific Conductance ($\mu\text{S}/\text{cm}$)

Post-Development Information

Time (Finish): 17:30

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Light Brown / Clear Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material Seen present
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 20.7 $^{\circ}\text{C}$
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Comments:

Monitoring Point Type Shallow / Deep

NO stabilized @ 0.23 mg/l

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 MP-10 D

Job Name: MacDill AFB
 By KC /MV Date 3/13/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 2:00 (1400)

Water Level:

Total Depth of Well:

Water Characteristics

Color light brown Clear cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material no
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) _____
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Interim Water Characteristics

Gallons Removed approximately 2 gallons

pH

Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)

Specific Conductance ($\mu\text{S}/\text{cm}$)

Post-Development Information

Time (Finish): 2:30

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color clear clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material no
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) 23.2
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Comments:

Monitoring Point Type Shallow / Deep

DO stabilized at 0.23 mg/l

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24-MP-105

Job Name: MacDill AFB
 By KC/MV Date 3/13/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 2:30

Water Level:

Total Depth of Well:

Water Characteristics

Color Dark Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material no
 pH _____ Temperature (°F °C) _____
 Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed approximately 2 gal

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): 3:30

Water Level:

Total Depth of Well:

Approximate Volume Removed:

Water Characteristics

Color Light Brown/Clear Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material no
 pH _____ Temperature (°F °C) 20.3
 Specific Conductance (µS/cm) _____

Comments:

Monitoring Point Type Shallow / Deep

D.O. Stabilized at 0.28 mg/l

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number ~~24P2~~ 24P2-10

Job Name: MacDill AFB
 By KC /MV Date 3/29/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 5:30

Water Level: 4.10 by S

Total Depth of Well: 18.50 by S

Water Characteristics

Color light brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material _____
 pH _____ Temperature (°F °C) _____
 Specific Conductance (µS/cm) _____

Interim Water Characteristics

Gallons Removed

pH

Temperature (°F °C)

Specific Conductance (µS/cm)

Post-Development Information

Time (Finish): ~~6:00~~ 6:00

Water Level:

Total Depth of Well:

Approximate Volume Removed: 6 gallons

Water Characteristics

Color clear yellow Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material no
 pH _____ Temperature (°F °C) _____
 Specific Conductance (µS/cm) _____

Comments: Fast pump rate, developed by volume

Monitoring Point Type Shallow / Deep

MONITORING POINT DEVELOPMENT RECORD

Page 1 of 1

Job Number: 722450.21
 Location Site OT-24
 Well Number 24 PZ-15

Job Name: MacDill AFB
 By KC/MV Date 3/23/95
 Measurement Datum TOC

Pre-Development Information

Time (Start): 8:10

Water Level:

Total Depth of Well:

Water Characteristics

Color dark Brown Clear Cloudy muddy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material no
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) _____
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Interim Water Characteristics

Gallons Removed

pH

Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$)

Specific Conductance ($\mu\text{S}/\text{cm}$)

Post-Development Information

Time (Finish):

Water Level:

Total Depth of Well:

Approximate Volume Removed: 6 gallons

Water Characteristics

Color Clear / yellow Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material no
 pH _____ Temperature ($^{\circ}\text{F}$ $^{\circ}\text{C}$) _____
 Specific Conductance ($\mu\text{S}/\text{cm}$) _____

Comments: developed by volume, fast pump rate

Monitoring Point Type Shallow / Deep

MONITORING POINT DEVELOPMENT RECORD

Page of

Job Number: 722450.21
 Location:
 Well Number: 24 PZ-2

Job Name: MacDill Air Force Base
 By: Date: 7-20-95
 Measurement Datum: T.O.C.

Pre-Development InformationTime (Start): 1810Water Level: 0.1Total Depth of Well: 5.5Water Characteristics

Color: Black Clear Cloudy
 Odor: (None) Weak Moderate Strong
 Any Films or Immiscible Material: None
 pH: 6.60 Temperature (°F): 77.1
 Specific Conductance (µS/cm): 12.66
 DO = 1.19

Intrinsic Water CharacteristicsGallons Removed: 6pH: 6.38Temperature (°F/°C): 28.2Specific Conductance (µS/cm): 11.44DO = 1.30Post-Development InformationTime (Finish): 1902Water Level: 0.1Total Depth of Well: 5.5Approximate Volume Removed: 8Water Characteristics

Color: Light Brown Clear Cloudy
 Odor: (None) Weak Moderate Strong
 Any Films or Immiscible Material: None
 pH: 6.41 Temperature (°F/°C): 28.0
 Specific Conductance (µS/cm): 12.16
 DO = 1.41

Comments:

FIGURE 3.7

MONITORING POINT
DEVELOPEMENT RECORD

Intrinsic Remediation TS
 MacDill Air Force Base, Florida



PARSONS
 ENGINEERING SCIENCE, INC.

Denver, Colorado

MONITORING POINT DEVELOPMENT RECORD

Page of

Job Number: 722450.21
 Location:
 Well Number: 24P2-30

Job Name: MacDill Air Force Base
 By: Date: 7-21-95
 Measurement Datum: T.O.C.

Pre-Development InformationTime (Start): 0730Water Level: 0.0Total Depth of Well: Water Characteristics

Color: Black Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material: None
 pH: 6.73 Temperature (°F/°C): 26.7
 Specific Conductance (µS/cm): 11.36
 DO = 4.17

Interim Water CharacteristicsGallons Removed: 2pH: 6.82Temperature (°F/°C): 26.5Specific Conductance (µS/cm): 15.12DO = 2.63Post-Development InformationTime (Finish): 0900Water Level: 0.0Total Depth of Well: 19.Approximate Volume Removed: 5Water Characteristics

Color: Light Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material: None
 pH: 6.77 Temperature (°F/°C): 27.4
 Specific Conductance (µS/cm): 13.91

Comments: WELL/PIEZO GOES DRY DURING DEVELOPMENT.

FIGURE 3.7

MONITORING POINT
DEVELOPEMENT RECORD

Intrinsic Remediation TS
 MacDill Air Force Base, Florida



PARSONS
 ENGINEERING SCIENCE, INC.

Denver, Colorado

MONITORING POINT DEVELOPMENT RECORD

Page of

Job Number: 722450.21
 Location
 Well Number 24P2-35

Job Name: MacDill Air Force Base
 By Date 7-20-95
 Measurement Datum TCC

Pre-Development InformationTime (Start): 1330Water Level: 0.0Total Depth of Well: 5.5Water Characteristics

Color Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material NONE
 pH 6.74 Temperature (°F) 60 29.1
 Specific Conductance (µS/cm) 5.01
 DO = 1.23

Intrinsic Water CharacteristicsGallons Removed 5pH 6.97Temperature (°F) 60 28.4Specific Conductance (µS/cm) 4.15DO = 1.79Post-Development InformationTime (Finish): 1435Water Level: 0.0Total Depth of Well: 5.5Approximate Volume Removed: 9Water Characteristics

Color Light Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material NONE
 pH 7.08 Temperature (°F) 60 28.1
 Specific Conductance (µS/cm) 12.5
 DO = 1.54

Comments:

FIGURE 3.7

MONITORING POINT
DEVELOPMENT RECORD

Intrinsic Remediation T5
 MacDill Air Force Base, Florida



**PARSONS
ENGINEERING SCIENCE, INC.**

Denver, Colorado

MONITORING POINT DEVELOPMENT RECORD

Page of

Job Number: 722450.21
 Location:
 Well Number: 24P2-LS

Job Name: MacDill Air Force Base
 By: Date: 7-20-95
 Measurement Datum: TOC

Pre-Development InformationTime (Start): 1710Water Level: 0.30Total Depth of Well: 5.5Water Characteristics

Color: Black Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material: NONE
 pH: 7.16 Temperature (°F): 77.6
 Specific Conductance (µS/cm): 15.99
 DO: 0.68

Interim Water CharacteristicsGallons Removed: 4pH: 6.74Temperature (°F): 27.9Specific Conductance (µS/cm): 15.92DO: 0.89Post-Development InformationTime (Finish): 1800Water Level: 0.30Total Depth of Well: 5.5Approximate Volume Removed: 8Water Characteristics

Color: Light Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material: NONE
 pH: 6.64 Temperature (°F): 28.2
 Specific Conductance (µS/cm): 14.97
 DO: 0.83

Comments:

FIGURE 3.7

MONITORING POINT
DEVELOPMENT RECORD

Intrinsic Remediation TS
 MacDill Air Force Base, Florida



PARSONS
 ENGINEERING SCIENCE, INC.

Denver, Colorado

MONITORING POINT DEVELOPMENT RECORD

Page of

Job Number: 722450.21
 Location:
 Well Number: 24PZ-55

Job Name: MacDill Air Force Base
 By: Date: 7-20-95
 Measurement Datum: TGC

Pre-Development Information

Time (Start): 1445

Water Level: 0.3

Total Depth of Well: 5.5

Water Characteristics

Color: Black Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material: NONE
 pH: 6.48 Temperature (°F): 29.3
 Specific Conductance (µS/cm): 13.46
 DO = 0.46

Interim Water Characteristics

Gallons Removed: 6

pH: 6.38

Temperature (°F): 28.3

Specific Conductance (µS/cm): 9.89

DO = 1.07

Post-Development Information

Time (Finish): 1640

Water Level: 0.3

Total Depth of Well: 5.5

Approximate Volume Removed: 13

Water Characteristics

Color: Light Brown Clear Cloudy
 Odor: None Weak Moderate Strong
 Any Films or Immiscible Material: NONE
 pH: 6.40 Temperature (°F): 28.9
 Specific Conductance (µS/cm): 16.08
 DO = 0.90

Comments:

FIGURE 3.7

MONITORING POINT DEVELOPEMENT RECORD

Intrinsic Remediation TS
 MacDill Air Force Base, Florida

PARSONS ENGINEERING SCIENCE, INC.
 Denver, Colorado

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 100-24-1
(number)

REASON FOR SAMPLING: ☐ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/24/95, 19 95, a.m./p.m.

SAMPLE COLLECTED BY: MVA/KC of ES 100-24-1

WEATHER: Clear

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH 16.5 FT. BELOW DATUM

Measured with: Oil/Water Interface Probe

WATER DEPTH 7.13 FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: 6.15m yellow (11.4 cm above water level)

Odor: no

Other Comments:

4 [x]

WELL EVACUATION:

Method: peristaltic

Volume Removed: 2.500 ml

Observations: Water (slightly - very) cloudy

Water level (rose - fell / no change)

Water odors:

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: 24.9 °C Measured with: Orion Instrument
 pH: 6.91 Measured with: _____
 Conductivity: 918 µS/cm Measured with: _____
 Dissolved Oxygen: 0.04 mg/l Measured with: Orion Instrument
 Redox Potential: -56.8 mV Measured with: _____
 Salinity: _____ Measured with: _____
 Nitrate: _____ Measured with: _____
 Sulfate: _____ Measured with: _____
 Ferrous Iron: _____ Measured with: _____
 Other: _____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - 1.5 L PETE BOTTLES
2 - 1 L PETE BOTTLES
1 - 1 L PETE BOTTLE
1 - 1 L PETE BOTTLE

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site QT-21
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL AN 24-2
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling
DATE AND TIME OF SAMPLING: 3/27/95, 1995 2:15 pm
SAMPLE COLLECTED BY: MD/KC of LS
WEATHER: Sunny - 80°
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED; ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: Good
INNER PVC CASING CONDITION IS: Good
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH 1.8 FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH _____ FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Clear / yellow
Odor: musty
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: percolation
Volume Removed: 2.500
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: moderate
Other comments: _____

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SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD 24 - ~~mw~~ 2
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling:
DATE AND TIME OF SAMPLING: 3/31, 1995 16:00 a.m./p.m.
SAMPLE COLLECTED BY: MVTKC of ES Demet
WEATHER: Cloudy
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☒ LOCKED: ☐ UNLOCKED
WELL NUMBER (B) - IS NOT) APPARENT
STEEL CASING CONDITION IS: Good
INNER PVC CASING CONDITION IS: Good
WATER DEPTH MEASUREMENT DATUM (B) - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH NM FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH NM FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: clear
Odor: weak
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: ~ 2 gal
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: weak
Other comments: some particulates present

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: _____ °C	Measured with: <u>Orion Instrument</u>
pH: _____	Measured with: _____
Conductivity: _____	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	

7 []

SAMPLE CONTAINERS (material, number, size): 1-TEH
1-TEH (MS/MSD)

8 []

ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 []

CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 []

OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 14D24 - 3 (number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/24/95, 19 14:00 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES 2401-01

WEATHER: _____

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED; ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT _____

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT _____

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 6.37 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Clear / yellow
Odor: no
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: 2500. ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: no
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>65.2</u> ° C	Measured with: <u>Orion Instrument</u>
pH: <u>6.70</u>	Measured with: _____
Conductivity: <u>112,810</u>	Measured with: _____
Dissolved Oxygen: <u>0.02</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-972</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 []

SAMPLE CONTAINERS (material, number, size): 1 - Heavy Acrylic, 1000 ml
2 - BTEX, Toluene, Vol

8 []

ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 []

CONTAINER HANDLING:

☒ Container Sides Labeled
☒ Container Lids Taped
☒ Containers Placed in Ice Chest

10 []

OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site 01-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD 24-4

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/24, 1995 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC of ES Dr. ...

WEATHER: Sunny &c.

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling

2 [x] PRODUCT DEPTH 1.0 FT. BELOW DATUM
Measured with: Oil/Water Interface Probe

WATER DEPTH 6.61 FT. BELOW DATUM
Measured with: Water Level Probe

3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Clear / yellow
Odor: no noticeable
Other Comments: _____

4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: 2560 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change) no
Water odors: no
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: 24.0 °C Measured with: Orion Instrument
 pH: 6.59 Measured with: _____
 Conductivity: 134 MC/CM Measured with: _____
 Dissolved Oxygen: 6.0% Measured with: Orion Instrument
 Redox Potential: -12.7 Measured with: _____
 Salinity: _____ Measured with: _____
 Nitrate: _____ Measured with: _____
 Sulfate: _____ Measured with: _____
 Ferrous Iron: _____ Measured with: _____
 Other: _____

7 []

SAMPLE CONTAINERS (material, number, size)

(1.2) 1 - 1200 -
1 - PLASTIC, AMERICAN, 1/2 GALLON (2)
2 - BTEX, VEC, 1/2 G

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:

Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
 [] Container Lids Taped
☒ Containers Placed in Ice Chest

10 []

OTHER COMMENTS:

SAMPLING LOCATION MacDill AFB Site 01-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 12D 74

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling:

DATE AND TIME OF SAMPLING: 2/24, 1995, 12:40 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC of ES

WEATHER: _____

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: _____

INNER PVC CASING CONDITION IS: _____

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH 1.0 FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH 3.05 → 3.13 FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Clear, slightly cloudy

Odor: slight

Other Comments: _____

4 [x]

WELL EVACUATION:

Method: 1.5L / 4.0

Volume Removed: 5.0L

Observations:

Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: slight

Other comments: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24MP-6 MD24-6

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/15, 1995 15:15 a.m./pm

SAMPLE COLLECTED BY: MP/KC/ED of ES Denver

WEATHER: partly cloudy ~ 75°F

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: FAIR - RUSTED and covered w/ ants

INNER PVC CASING CONDITION IS: good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH _____ FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH 2.90 FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: _____

Odor: _____

Other Comments: _____

4 [x]

WELL EVACUATION:

Method: peristaltic Pump

Volume Removed: 2000 ml

Observations: Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: no significant odor

Other comments: lots of ants

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>23.2</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.76</u>	Measured with: _____
Conductivity: <u>241 x 10 μS/cm</u>	Measured with: _____
* Dissolved Oxygen: <u>2.20 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	Measured with: _____

7 [] SAMPLE CONTAINERS (material, number, size): 1- 250 ml unpreserved, Alkalinity
1- 125 ml unpreserved, Anions
2- 40 ml BTEX } preserved
2- 40 ml TVR }

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: dissolved oxygen not calibrated
samples taken after conditions stabilized
and packed in ICE.

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD-24-6 (number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/22/, 1995 0900 am/p.m.

SAMPLE COLLECTED BY: MD/KC of ES Denver

WEATHER: Sunny - 80°F

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Fair

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling

2 [x] PRODUCT DEPTH ND FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe

WATER DEPTH 3.00 → 3.42 FT. BELOW DATUM
Measured with: Water Level Probe

3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Clear

Odor: Slight

Other Comments:

4 [x] WELL EVACUATION:

Method: peristaltic

Volume Removed: 2000 ml

Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: Slight
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>24.6</u> ° <u>C</u>	Measured with: <u>Orion Instrument</u>
pH: <u>6.53</u>	Measured with: _____
Conductivity: <u>235 µS/cm</u>	Measured with: _____
Dissolved Oxygen: <u>8.0%</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-215</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

[] Preservatives added: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING.

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site 01-24

SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL

MD 24 - maw 6

(number)

MW26 - TE H
Dup

REASON FOR SAMPLING: ☒ Regular Sampling, ☐ Special Sampling:

DATE AND TIME OF SAMPLING: 3/31, 1995 15:30 a.m./p.m.

SAMPLE COLLECTED BY: MV/LR of ES Denver

WEATHER: Cloudy 80°

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH ND FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH NM FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Clear

Odor: Moderate

Other Comments:

4 [x]

WELL EVACUATION:

Method: peristaltic

Volume Removed: 2 gallons

Observations: Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: moderate

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: _____ °C	Measured with: <u>Orion Instrument</u>
pH: _____	Measured with: _____
Conductivity: _____	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	

7 []

SAMPLE CONTAINERS (material, number, size): 2-BTL x

1-TEH
1-TEH DUP (2E)

8 []

ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

[] Preservatives added:

Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 []

CONTAINER HANDLING:

[] Container Sides Labeled
[] Container Lids Taped
[] Containers Placed in Ice Chest

10 []

OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site 01-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD 24 - mw 6A

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/31/95, 19 15:40 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC of ES Danner

WEATHER: Cloudy 80°

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER 6A - IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH ND FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH NM FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Clear

Odor: None

Other Comments:

4 [x]

WELL EVACUATION:

Method:

Volume Removed:

Observations:

Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors:

Other comments:

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL M024-GA
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/15/95 1:20 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC/JF of ES Neuse

WEATHER: Partly Sunny

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: FAIR - RUSTED

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling

2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe

WATER DEPTH 2.66 FT. BELOW DATUM
Measured with: Water Level Probe

3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____

4 [x] WELL EVACUATION:
Method: peristaltic pump
Volume Removed: 2000 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: moderate HC odor
Other comments: red particulate material present, could be rust?

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>23.3</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>7.49</u>	Measured with: _____
Conductivity: <u>74 x 10 μS/S</u>	Measured with: _____
Dissolved Oxygen: <u>0.283 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1-250 ml - unpreserved Alkalinity
1-125 ml - unpreserved ARICAS
2-40 ml BTEX } preserved bottles
2-40 ml TUVH }

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: D.O. not calibrated, samples taken
after conditions stabilized, samples packed in
ICE

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD 24-6A
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/22, 1995 0830 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES Denver
WEATHER: Sunny - 90°
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: Good
INNER PVC CASING CONDITION IS: Good
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH Np FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 2.70 - 2.75 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Clear
Odor: Moderate Sulfuric
Other Comments:
- 4 [x] WELL EVACUATION:
Method: peristaltic pump
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - ~~fell~~ no change)
Water odors: moderate
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: _____ °C	Measured with: <u>Orion Instrument</u>
pH: _____	Measured with: _____
Conductivity: _____	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	

7 [] SAMPLE CONTAINERS (material, number, size): 2-BTRY

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:

Method _____	Containers: _____
Method _____	Containers: _____
Method _____	Containers: _____
Method _____	Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
[] Container Lids Taped
[] Containers Placed in Ice Chest

10 [] OTHER COMMENTS:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>22.1</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.48</u>	Measured with: _____
Conductivity: <u>77810</u> $\mu S/cm$	Measured with: _____
Dissolved Oxygen: <u>Broke</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-95.9 mV</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): HACH DUP

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MO - 24 - 7

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/21/95, 19 11:05 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC of ES Dennis

WEATHER: ACT - Sunny - 60°F

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Fair (Rusted)

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH 11 FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH 2.48 2.66 FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Cloudy

Odor: Slight

Other Comments:

4 [x]

WELL EVACUATION:

Method: peristaltic

Volume Removed: 250 cc

Observations: Water (slightly - very) cloudy

Water level (rose - fell) no change

Water odors: slight - none

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>23.3</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>7.40</u>	Measured with: _____
Conductivity: <u>123.4</u>	Measured with: _____
Dissolved Oxygen: <u>1.2</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-34.4</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD 24-B

(number)

REASON FOR SAMPLING: [☒] Regular Sampling; [] Special Sampling;

DATE AND TIME OF SAMPLING: 3/27/95, 1995 09:15 a.m./p.m.

SAMPLE COLLECTED BY: MD/KC of ES Denver

WEATHER: Sunny 80°

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

[] LOCKED:

[☒] UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Fair

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

[] DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

[] MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH NP FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH 2.80' → 2.85' Final FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: clear

Odor: slight

Other Comments:

4 [x]

WELL EVACUATION:

Method: Distillate

Volume Removed: 2500 ml

Observations: Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: slight

Other comments: water level rose 1' because of vegetation cover there through pump

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>22.1</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.61</u>	Measured with: _____
Conductivity: <u>511.6</u> µS/cm	Measured with: _____
Dissolved Oxygen: <u>6.14</u> mg/l	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-117.9</u> mV	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 100 mL Plastic Bottle (2)
100 mL Plastic Bottle (2)

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD 24-9 (number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/20, 1995 10:05 a.m. p.m.
SAMPLE COLLECTED BY: MV/KC/JF of ES Dan
WEATHER: _____
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT _____
STEEL CASING CONDITION IS: _____
INNER PVC CASING CONDITION IS: _____
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT _____
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH to not present FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 2.61 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: portable pump
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: no
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB, [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>24.9</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>7.66</u>	Measured with: <u>811</u>
Conductivity: <u>905.345/µm</u>	Measured with: <u>Ecotech</u>
Dissolved Oxygen: <u>0.30 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-76.0 mV</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	Measured with: _____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - 125ml Polys, 2 x 40ml BTL,
2 x 40ml TUN, 7 x 40ml VOC, 1 x 50ml
methane, 1 x 250ml HACH grab

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method TUN Containers: _____
 Method QTEX Containers: _____
 Method VOC Containers: _____
 Method METHAN Containers: _____

9 [] CONTAINER HANDLING:

[x] Container Sides Labeled
 [] Container Lids Taped
 [x] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL ME-7 10-10-9

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/1/95, 1995 10:00 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES Deane
WEATHER: Sunny 80°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH 1.0' FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH 2.05' - 2.11' FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: clear

Odor: none - slight

Other Comments:

4 [x]

WELL EVACUATION:

Method: peristaltic pump

Volume Removed: 2.500 ml

Observations:

Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: none

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>22.3</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.67</u>	Measured with: _____
Conductivity: <u>110 µS/cm</u>	Measured with: _____
Dissolved Oxygen: <u>0.07</u> %	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-123.6 mV</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site 24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD 24-10
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/31, 1995 16:20 a.m./p.m.
SAMPLE COLLECTED BY: MV/RO of ES
WEATHER: cloudy 20°
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (S) IS NOT APPARENT Good
STEEL CASING CONDITION IS: Good
INNER PVC CASING CONDITION IS: Good
WATER DEPTH MEASUREMENT DATUM (S) IS NOT APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH NP FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH NM FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: clear
Odor: none weak 3
Other Comments:
- 4 [x] WELL EVACUATION:
Method: perstatic
Volume Removed: 2 gallons
Observations: Water (slightly) very cloudy
Water level (rose - fell - no change)
Water odors: to none
Other comments:

Ground Water Sampling Record - Monitoring Well No. MD-10 (Cont'd)

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: _____ ° _____ C	Measured with: <u>Orion Instrument</u>
pH: _____	Measured with: _____
Conductivity: _____	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	

7 [] SAMPLE CONTAINERS (material, number, size):

2 - BTRX
1 - HACH VOA for
Sulfate and

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

[] Preservatives added:

Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9[] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS:

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Page 2 of 2

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD-10A

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/21/95, 19 1995 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES Number
WEATHER: Sunny Good
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Fair

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling

2 [x] PRODUCT DEPTH 2.15 FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe

WATER DEPTH 2.15 FT. BELOW DATUM
Measured with: Water Level Probe

3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Clear
Odor: Slight
Other Comments:

4 [x] WELL EVACUATION:
Method: Install
Volume Removed: 2.5 gal
Observations: Water (slightly - very) cloudy
Water level (rose - fell, no change)
Water odors: slight
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>20.4</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>7.5</u>	Measured with: _____
Conductivity: <u>141 uS</u>	Measured with: _____
Dissolved Oxygen: <u>2.01</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-371.3</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:

 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
[] Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site 24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL MD24 - MW 10A

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/31, 1995 16:10 a.m./p.m.

SAMPLE COLLECTED BY: MATKO of ES Denver

WEATHER: cloudy - 80°

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (~~IS~~ - IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (~~IS~~ - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling

2 [x] PRODUCT DEPTH NP FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe

WATER DEPTH 11M FT. BELOW DATUM
Measured with: Water Level Probe

3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Clear
Odor: weak
Other Comments: _____

4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: ~ 2 gallons
Observations: Water (~~slightly~~ - very) cloudy
Water level (rose - fell - no change)
Water odors: none
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: _____ °C	Measured with: <u>Orion Instrument</u>
pH: _____	Measured with: _____
Conductivity: _____	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	

7 [] SAMPLE CONTAINERS (material, number, size): 2 - BTEX
1 - ~~NO~~ HACI + NOA for
Sulfate redox

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

[] Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24

SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL

2.4 MP - 115

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling:

DATE AND TIME OF SAMPLING: 3/23, 1995 15:10 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC of ES D. Miller

WEATHER: clear - 60°F

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: good

INNER PVC CASING CONDITION IS: good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH _____ FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH nil FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: clear (yellowish milky white)

Odor: moderate sulfide

Other Comments:

4 [x]

WELL EVACUATION:

Method: peristaltic

Volume Removed: 2000 ml

Observations: Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: moderate sulfide

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>25.6</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.49</u>	Measured with: _____
Conductivity: <u>116 x 10</u>	Measured with: _____
Dissolved Oxygen: <u>0.39 mg/L</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-91.4</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - HIGH GRADE, METHANE, Anions
2 - BTEX, VOA, VOC, TUVH

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP - 15
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/24, 1995 08.00 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES D.
WEATHER: Sunny - 80°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: Good
INNER PVC CASING CONDITION IS: Good
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH 1.1' FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 3.64 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Dark Brown
Odor: moderate
Other Comments: slow pump rate
- 4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: 2000 ml
Observations: Water (slightly - ~~very~~) cloudy
Water level (rose - ~~fell~~ - no change)
Water odors: moderate sulfate
Other comments: slow pump rate

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>24.6</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.16</u>	Measured with: _____
Conductivity: <u>585.0</u> $\mu S/cm$	Measured with: _____
Dissolved Oxygen: <u>0.14</u> mg/L	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-151</u> mV	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - Amber methylene, 4004
2 - BTEX, VOC, TVH

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

☐ Preservatives added:

Method _____	Containers: _____
Method _____	Containers: _____
Method _____	Containers: _____
Method _____	Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP-2 D
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/23, 1995 125 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES 10
WEATHER: Sunny
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: ok
INNER PVC CASING CONDITION IS: ok
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH 4.4 FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 4.4 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Clear - cloudy
Odor: moderate to strong
Other Comments:
- 4 [x] WELL EVACUATION:
Method: percolation
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: Strong - Sulfuric
Other comments:

$$S[x]$$

- [] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x]

Temp: 26.0 °C Measured with: Orion Instrument
pH: 6.43 Measured with: _____
Conductivity: 140 µS/cm Measured with: _____
Dissolved Oxygen: 6.20 mg/l Measured with: Orion Instrument
Redox Potential: -79.5 Measured with: _____
Salinity: _____ Measured with: _____
Nitrate: _____ Measured with: _____
Sulfate: _____ Measured with: _____
Ferrous Iron: _____ Measured with: _____
Other: _____

7 []

8 []

- [] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

- { } Preservatives added:
- Method _____ Containers: _____
- Method _____ Containers: _____
- Method _____ Containers: _____
- Method _____ Containers: _____

9[]

- ☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 []

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 117P - 25

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/23, 1995 14:00 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES Denver
WEATHER: Sunny - 80°
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED; ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: new
INNER PVC CASING CONDITION IS: new
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 3.14 _____ FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: brown
Odor: strange
Other Comments:
- 4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: strange
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>24.2</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>5.61</u>	Measured with: _____
Conductivity: <u>33,810</u> $\mu S/cm$	Measured with: _____
Dissolved Oxygen: <u>0.06 mg/L</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-211.9</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 2 - 53T E, 100, TWA,
1 - Arion, methanol, 100, 500 mL

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method methanol Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
 [] Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP - 25
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/31/95, 1995 15:15 a.m./p.m.
SAMPLE COLLECTED BY: MP/KC of ES Denver
WEATHER: Cloudy 80°
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (25) IS NOT) APPARENT
STEEL CASING CONDITION IS: New
INNER PVC CASING CONDITION IS: New
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH NM FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH NM FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: brassy
Odor: strange H.C.
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: Approx 2 gallons
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: moderate
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: _____ °C	Measured with: <u>Orion Instrument</u>
pH: _____	Measured with: _____
Conductivity: _____	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1- T e H

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

☐ Preservatives added:

 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24MP-243D
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/20, 19 95 12:20 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES Denver
WEATHER: Sunny - 80°
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED; ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: New
INNER PVC CASING CONDITION IS: New
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH NM / NP FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH NM FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic Pump
Volume Removed: 2000 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: slight
Other comments: milky white color

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>25.2</u> ° C	Measured with: <u>Orion Instrument</u>
pH: <u>6.84</u>	Measured with: _____
Conductivity: <u>165 µS</u>	Measured with: _____
Dissolved Oxygen: <u>0.16</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	

7 []

SAMPLE CONTAINERS (material, number, size): 1-250 ml Alkalinity
1-125 ml Arion, 2x 40 ml BTEX, 2x 40 ml
TVH, 2 x 40 ml VOC, 1 x 50 ml Methane,
1-250 Hach grab

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[x] Preservatives added:

Method _____	Containers: <u>BTEX</u>
Method _____	Containers: <u>TVH</u>
Method _____	Containers: <u>VOC</u>
Method _____	Containers: <u>METHANE</u>

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
 [] Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS:

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP-35

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/10, 1995 11:25 am /p.m.

SAMPLE COLLECTED BY: MP/KC of ES Denver

WEATHER: Sunny - 80°

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: New

INNER PVC CASING CONDITION IS: New

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling

2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe

WATER DEPTH 2.30 FT. BELOW DATUM
Measured with: Water Level Probe

3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____

4 [x] WELL EVACUATION:
Method: peristaltic pump
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: slight sulfuric
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>23.5</u> ° C	Measured with: <u>Orion Instrument</u>
pH: <u>7.02</u>	Measured with: _____
Conductivity: <u>49 x 10 uS/cm</u>	Measured with: _____
Dissolved Oxygen: <u>0.08 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-238.3 mV</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1-250ml Alkalinity, 1-125ml Anion, 2x 40ml BTEX, 2x 40ml TVH, 2x 40ml VOC, 1-50ml METHANE, 1 250 HACH grab.

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: BTEX
 Method _____ Containers: TVH
 Method _____ Containers: METHANE
 Method _____ Containers: VOC

9 [] CONTAINER HANDLING:

[x] Container Sides Labeled
 [] Container Lids Taped
 [x] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24-1P-45
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/24, 1995 1150 a.m.
SAMPLE COLLECTED BY: MYTRO of ES Denver
WEATHER: clear - 50
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED; ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT new
STEEL CASING CONDITION IS: new
INNER PVC CASING CONDITION IS: new
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH NP FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 3.42 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Brown / Cloudy
Odor: AP
Other Comments:
- 4 [x] WELL EVACUATION:
Method: perforator
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change) fell - no change
Water odors: no
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>20</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.87</u>	Measured with: _____
Conductivity: <u>1081 uS</u>	Measured with: _____
Dissolved Oxygen: <u>0.72</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-97.7</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 []

SAMPLE CONTAINERS (material, number, size): 1 - BATH, 4 L, 1 L, 1 L, 1 L
2 - BTEX, VOC, TCH

8 []

ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 []

CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 []

OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995 3/20/95

GROUND WATER SAMPLING RECORD - MONITORING WELL 24MP-5D

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/20/95, 1995 1220 am/p.m.

SAMPLE COLLECTED BY: MV/KC/SE of ES

WEATHER: Sunny 75-80°F

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: NEW

INNER PVC CASING CONDITION IS: NEW

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH _____ FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH Not measured _____ FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: _____

Odor: _____

Other Comments: _____

4 [x]

WELL EVACUATION:

Method: peristaltic pump

Volume Removed: 1500 ml

Observations: Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: ~~not~~ none noticeable

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: _____ ° C	Measured with: <u>Orion Instrument</u>
pH: _____	Measured with: _____
Conductivity: _____	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:

 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
[] Container Lids Taped
[] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP 51
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/24/, 1995 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC of ES 111111

WEATHER: Sunny - 80°

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH 11' FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH 11M FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance:

Odor:

Other Comments:

4 [x]

WELL EVACUATION:

Method:

Volume Removed:

Observations: Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors:

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>24.1</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.65</u>	Measured with: _____
Conductivity: <u>159 x 10</u>	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-60.4</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - metal, 1 - plastic, 1 - 2 - BTEX, VOC, TCH

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☐ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995 3/20/95

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP-55
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/20, 1995 08:50 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC/SF of ES Denver
WEATHER: Sunny 75-80
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: NEW

INNER PVC CASING CONDITION IS: NEW

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 3.48 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic Pump
Volume Removed: 2000 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: slight
Other comments: Brown color initially

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>20.6 ° C</u>	Measured with: <u>Orion Instrument</u>
pH: <u>6.86</u>	Measured with: _____
Conductivity: <u>7840 µs/cm</u>	Measured with: _____
Dissolved Oxygen: <u>1.31 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-186.5 mV</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1-250 ml unpres. Alkalinity; 1-125 ml Anions; 2-40ml BTEX; 2-40ml TVH; 2-40ml VOC; 1-50 ml Methane

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[x] Preservatives added:
 Method TVH Containers: _____
 Method BTEX Containers: _____
 Method VOC Containers: _____
 Method METHANE Containers: _____

9 [] CONTAINER HANDLING:

[x] Container Sides Labeled
 [] Container Lids Taped
 [x] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: IF Spurge waters have not entirely been stabilized after 15 minutes samples will be taken

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24MP-65
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/24, 1995 2:10 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES recess
WEATHER: partly cloudy - 80°
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED; ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: good

INNER PVC CASING CONDITION IS: OK

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH 1 ft FT. BELOW DATUM
Measured with: Oil/Water Interface Probe
- WATER DEPTH nm FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: clear / yellow
Odor: none
Other Comments:
- 4 [x] WELL EVACUATION: peristaltic
Method: peristaltic
Volume Removed: 2500
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: none
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: 21.4 ° C Measured with: Orion Instrument
pH: 6.82 Measured with: _____
Conductivity: 83 x 10 μ S/cm Measured with: _____
Dissolved Oxygen: 0.11 mg/l Measured with: Orion Instrument
Redox Potential: -139.8 mV Measured with: _____
Salinity: _____ Measured with: _____
Nitrate: _____ Measured with: _____
Sulfate: _____ Measured with: _____
Ferrous Iron: _____ Measured with: _____
Other: _____

7 []

SAMPLE CONTAINERS (material, number, size): 1 - 100 mL methanol, 4 - 100 mL, 4 - 100 mL
2 - 100 mL, 1 - 100 mL, 1 - 100 mL

8 []

ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

[] Preservatives added:

Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 []

CONTAINER HANDLING:

[x] Container Sides Labeled
[] Container Lids Taped
[x] Containers Placed in Ice Chest

10 []

OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP-70
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/16, 1995 07:45 AM
SAMPLE COLLECTED BY: MD/KC/JP of ES Denver
WEATHER: Partly Cloudy ~65°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: New

INNER PVC CASING CONDITION IS: New

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): not surveyed yet

Check-off

1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling

2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe

WATER DEPTH not measured _____ FT. BELOW DATUM
Measured with: Water Level Probe

3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____

4 [x] WELL EVACUATION:
Method: peristaltic pump
Volume Removed: 2000 ml
Observations: Water (slightly - very) cloudy - milky white
Water level (rose - fell - no change)
Water odors: no noticeable odor
Other comments: Skum present in water

Ground Water Sampling Record - Monitoring Well No. 24 MP-7D (Cont'd)

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>22.3</u> ° <u>C</u>	Measured with: <u>Orion Instrument</u>
pH: <u>6.10</u>	Measured with: _____
Conductivity: <u>360 x 10 μS/s</u>	Measured with: _____
*Dissolved Oxygen: <u>0.35 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1-250 ml unpreserved Alkalinity
1-125 ml unpreserved Ammonia
2-40 ml BTEX } preserved
2-40 ml TVH }

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

[] Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
[] Container Lids Taped
[] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: *D.O. not calibrated;
Samples taken after pH, conductivity, and D.O. had
stabilized. Samples shipped in ice
conductivity had probe and left on

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 74 MP-7D
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/21, 1995 8:30 a.m./p.m.
SAMPLE COLLECTED BY: MY/KC of ES Denver
WEATHER: Sunny - 60°
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED; ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: new
INNER PVC CASING CONDITION IS: new
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH N/A FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH N/A FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: clear
Odor: slight Galt odor
Other Comments:
- 4 [x] WELL EVACUATION:
Method: percolation for P
Volume Removed: 2000 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: slight
Other comments: Clearer water

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>21.0</u> °C	Measured with: <u>Orion Instrument YSI</u>
pH: <u>6.73</u>	Measured with: _____
Conductivity: <u>343.10</u>	Measured with: _____
Dissolved Oxygen: <u>6.52</u>	Measured with: <u>Orion Instrument YSI</u>
Redox Potential: <u>-224</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 mp-75
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/16, 1995 08:45 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC/CE of ES Denver
WEATHER: Partly Cloudy ~ 70° F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: New
INNER PVC CASING CONDITION IS: New
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR not serviced yet
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 1.92 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic pump
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: moderate odor -- Sulfuric Smell
Other comments: no significant change

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>21.0</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.67</u>	Measured with: _____
Conductivity: <u>98 x 10 μS/cm</u>	Measured with: _____
* Dissolved Oxygen: <u>0.9 mg/L</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1- 125 ml unpreserved Alkalinity
1- 125 ml unpreserved Anion
2- 40 ml BTEX } preserved
2- 40 ml TVH }

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: * Dissolved Oxygen not calibrated
Samples taken after d.o., pH, and conductivity
had stabilized; Samples packed in ICE

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 and 75
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/21/95, 1995 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES Yamamoto
WEATHER: Sunny - 80°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: new

INNER PVC CASING CONDITION IS: new

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH 2.1' FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 2.41 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Cloudy, brown
Odor: Slight
Other Comments:
- 4 [x] WELL EVACUATION:
Method: Hand Siphon
Volume Removed: 2000 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: Slight
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

- ☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>21</u> ° <u>C</u>	Measured with: <u>Orion Instrument</u>
pH: _____	Measured with: _____
Conductivity: <u>950 µS</u>	Measured with: _____
Dissolved Oxygen: _____	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:

 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

- ☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP-89
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/20, 1995 13:25 a.m./p.m.
SAMPLE COLLECTED BY: MS/KC of ES Dan
WEATHER: Sunny - 80°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: New
INNER PVC CASING CONDITION IS: New
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH NP FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH NP FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic pump
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: None
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>25.0</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.65</u>	Measured with: _____
Conductivity: <u>169.10</u>	Measured with: _____
Dissolved Oxygen: <u>0.19</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1-250ml NALGENE, 1-125ml
Arion, 2x40ml BTEX, 2x40ml TUVH,
2x40ml VOC, 1x50ml methanol,
2-250ml each GRAB (DOP)

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☒ Preservatives added:
Method _____ Containers: BTEX
Method _____ Containers: TUVH
Method _____ Containers: VOC
Method _____ Containers: Methanol

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 4MP-85
(number)

REASON FOR SAMPLING: ☐ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: _____, 19____ a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES
WEATHER: _____

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: _____ ☐ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT _____
STEEL CASING CONDITION IS: _____
INNER PVC CASING CONDITION IS: _____
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT _____
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): A. Equipment used in sampling
- 2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH _____ FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: _____
Volume Removed: _____
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: _____
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>23.0</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>7.06</u>	Measured with: _____
Conductivity: <u>23 x 10</u>	Measured with: _____
Dissolved Oxygen: <u>0.19</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:

 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
[] Container Lids Taped
[] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP-90 (number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/15, 1995 14.00 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC/JP of ES Remuez

WEATHER: Partly Sunny ~ 75°F

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: NEW

INNER PVC CASING CONDITION IS: NEW

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH _____ FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH not measured _____ FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: _____

Odor: _____

Other Comments: _____

4 [x]

WELL EVACUATION:

Method: Peristaltic pump

Volume Removed: 2000 ml

Observations: Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: moderate odor

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>23.9</u> ° <u>C</u>	Measured with: <u>Orion Instrument</u>
pH: <u>6.56</u>	Measured with: _____
Conductivity: <u>148 x 10 μS/cm</u>	Measured with: _____
Dissolved Oxygen: <u>0.56 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1-250 ml unpreserved Alkaline
* 1-250 ml unpreserved Anions
2-40 ml BTEX } preserved
2-40 ml TVH }

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: * d.O. Not Calibrated
Samples taken after water conditions were
stabilized placed in ICE
* Anion Sample taken after pumping had started
stopped, and been restarted; we forgot it.

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 211-247-91
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/21, 1995 1:30 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC of ES Don

WEATHER: Sunny 60°F

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: new

INNER PVC CASING CONDITION IS: new

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling

2 [x] PRODUCT DEPTH 11 FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe

WATER DEPTH 11 FT. BELOW DATUM
Measured with: Water Level Probe

3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: milky white
Odor: slight
Other Comments:

4 [x] WELL EVACUATION:
Method: first 200 gallons
Volume Removed:
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors:
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: -2.5 °C Measured with: Orion Instrument
pH: 6.84 Measured with: _____
Conductivity: 574.0 $\mu S/cm$ Measured with: _____
Dissolved Oxygen: 0.05 mg/L Measured with: Orion Instrument
Redox Potential: -212.08 Measured with: _____
Salinity: _____ Measured with: _____
Nitrate: _____ Measured with: _____
Sulfate: _____ Measured with: _____
Ferrous Iron: _____ Measured with: _____
Other: _____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

[] Preservatives added:

Method_____ Containers:_____

Method_____ Containers:_____

Method_____ Containers:_____

Method_____ Containers:_____

9[] CONTAINER HANDLING:

- ☐ Container Sides Labeled
- ☐ Container Lids Taped
- ☐ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP-95
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/15, 1995 14:25 a.m./p.m.
SAMPLE COLLECTED BY: MD/KC/JP of ES Denver
WEATHER: Partly Sunny, ~75°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED; ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: New
INNER PVC CASING CONDITION IS: New
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☒ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR not Survey yet
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 1.95 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: _____
Volume Removed: 2000 ml
Observations: Water (slightly - very) cloudy almost clear
Water level (rose - fell - no change)
Water odors: moderate H.C. odor
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>21.5</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.98</u>	Measured with: _____
Conductivity: <u>66 x 10 μS</u>	Measured with: _____
Dissolved Oxygen: <u>0.05 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	Measured with: _____

7 [] SAMPLE CONTAINERS (material, number, size): 1-250 ml unpreserved Alkaline
* 1-125 ml unpreserved Anions
2-40 ml BTEX } * preserved
2-40 ml TVH }

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: * Dissolved oxygen not calibrated,
Samples picked in ICE, and TAKEN when
conditions have stabilized.
* Anion Sample taken after pumping had stopped and
then restarted; we forgot to fill it.

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MP-10 D
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/15, 1995 11:10 a.m.
SAMPLE COLLECTED BY: MD/KC/JF of ES Denver
WEATHER: Pretty cloudy, light wind, ~70°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: Excellent (new)
INNER PVC CASING CONDITION IS: NEW
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH not measured _____ FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic Sta Pump
Volume Removed: 1500 mL
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: no noticeable fish odor
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>23.8</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>7.29</u>	Measured with: _____
Conductivity: <u>95 μS/cm</u>	Measured with: _____
* Dissolved Oxygen: <u>0.26 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - 250 ml unpreserved Alkalinity
1 - 125 ml unpreserved, Anions
2 - 40 ml preserved, RTE+
2 - 40 ml preserved, TVH

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS: * No meter not calibrated to zero Standard
Salinity unknown
Sampled after probes ~~stabilized~~ stabilized

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24MP-10D
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/23, 1995 11:50 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES DC-5
WEATHER: Sunny - 65°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H₂O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH 10' FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 10' FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Cloudy
Odor: Slight
Other Comments: See above
- 4 [x] WELL EVACUATION:
Method: per standard
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: slight
Other comments: see above

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>24.1</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.67</u>	Measured with: _____
Conductivity: <u>98.46</u> µS/cm	Measured with: _____
Dissolved Oxygen: <u>0.21</u> mg/l	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-81.6</u>	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 2 VCC, 1 METHANE,
1 HACH

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
 [] Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24MP-10 S
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/15, 1995 12:00 a.m./p.m.
SAMPLE COLLECTED BY: MD/KC/JF of ES DEUER
WEATHER: Partly Cloudy ~70°F
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: NEW

INNER PVC CASING CONDITION IS: NEW

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH _____ FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 2.37 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: _____
Odor: _____
Other Comments: _____
- 4 [x] WELL EVACUATION:
Method: peristaltic pump
Volume Removed: _____
Observations: Water (slightly) - very cloudy
Water level (rose - fell - no change)
Water odors: none
Other comments: _____

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>22.2</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>7.57</u>	Measured with: _____
Conductivity: <u>4540 µmhos/cm µS</u>	Measured with: _____
Dissolved Oxygen: <u>2.2 mg/l</u>	Measured with: <u>Orion Instrument</u>
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - 250 ml nonpreserved Alkalinity
1 - 125 ml nonpreserved Arsenic
2 - 40 ml preserved BTEX
2 - 40 ml preserved TVH

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☐ Container Sides Labeled
☐ Container Lids Taped
☐ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: * Do not sterilized
Sample after pH was stabilized, added w/ DE

SAMPLING LOCATION MacDill AFB Site OT-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 MI-185
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 2/23, 1995 11:10 a.m./p.m.
SAMPLE COLLECTED BY: MV/KC of ES 100
WEATHER: Cloudy
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: Good

INNER PVC CASING CONDITION IS: Good

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH NP FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH 2.42 FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Cloudy Brown
Odor: moderate
Other Comments:
- 4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell - no change)
Water odors: moderate
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☒ Pump, type: Peristaltic Pump
☐ Other, describe: _____

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: <u>22.3</u> °C	Measured with: <u>Orion Instrument</u>
pH: <u>6.53</u>	Measured with: _____
Conductivity: <u>482.10</u> µS/cm	Measured with: _____
Dissolved Oxygen: <u>6.14</u> mg/l	Measured with: <u>Orion Instrument</u>
Redox Potential: <u>-116.5</u> mV	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	

7 [] SAMPLE CONTAINERS (material, number, size): 11.1L Alcoa - RTG
METHANE, VOC (2), HACH (2) - 0.5

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site 01-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL

2412-1 D

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 3/24, 1995 11:15 a.m./p.m.

SAMPLE COLLECTED BY: MV/KC of ES Denver

WEATHER: Partly Cloudy 60°F

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS - IS NOT) APPARENT

STEEL CASING CONDITION IS: new

INNER PVC CASING CONDITION IS: new

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

1 [x]

EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone

Items Cleaned (List): All Equipment used in sampling

2 [x]

PRODUCT DEPTH NP FT. BELOW DATUM

Measured with: Oil/ Water Interface Probe

WATER DEPTH NM FT. BELOW DATUM

Measured with: Water Level Probe

3 [x]

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Cloudy, light Brown

Odor: none

Other Comments: —

4 [x]

WELL EVACUATION:

Method: peristaltic

Volume Removed: 2500 ml

Observations: Water (slightly - very) cloudy

Water level (rose - fell - no change)

Water odors: none

Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [x] Pump, type: Peristaltic Pump
 [] Other, describe: _____

Sample obtained is [x] GRAB: [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: 22.0° C Measured with: Orion Instrument
 pH: 6.82 Measured with: _____
 Conductivity: 114 ± 10 MS/cm Measured with: _____
 Dissolved Oxygen: 0.13 mg/l Measured with: Orion Instrument
 Redox Potential: -169.0 mV Measured with: _____
 Salinity: _____ Measured with: _____
 Nitrate: _____ Measured with: _____
 Sulfate: _____ Measured with: _____
 Ferrous Iron: _____ Measured with: _____
 Other: _____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - METHANE, HACH, Ammons
2 - BTEX, VOC, TUIH

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFB Site 01-24
SAMPLING DATE(S) March 1995

GROUND WATER SAMPLING RECORD - MONITORING WELL 24AP2-15
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;
DATE AND TIME OF SAMPLING: 3/24, 1995 12:30 pm
SAMPLE COLLECTED BY: MYZKE of ES Denver
WEATHER: Partly Cloudy - 80
DATUM FOR WATER DEPTH MEASUREMENT (Describe): Top of Well Casing

MONITORING WELL CONDITION:

☒ LOCKED; ☒ UNLOCKED
WELL NUMBER (IS - IS NOT) APPARENT
STEEL CASING CONDITION IS: new
INNER PVC CASING CONDITION IS: new
WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe):

Check-off

- 1 [x] EQUIPMENT CLEANED BEFORE USE WITH Alconox, Distilled H2O, and Acetone
Items Cleaned (List): All Equipment used in sampling
- 2 [x] PRODUCT DEPTH NP FT. BELOW DATUM
Measured with: Oil/ Water Interface Probe
- WATER DEPTH _____ FT. BELOW DATUM
Measured with: Water Level Probe
- 3 [x] WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Clear / yellow
Odor: Slight
Other Comments:
- 4 [x] WELL EVACUATION:
Method: peristaltic
Volume Removed: 2500 ml
Observations: Water (slightly - very) cloudy
Water level (rose - fell) no change
Water odors: slight
Other comments:

5 [x] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
[x] Pump, type: Peristaltic Pump
[] Other, describe: _____

Sample obtained is [x] GRAB; [] COMPOSITE SAMPLE

6 [x] ON-SITE MEASUREMENTS:

Temp: 20.7°C Measured with: Orion Instrument
pH: 6.75 Measured with: _____
Conductivity: 70 x 10³ µS/cm Measured with: _____
Dissolved Oxygen: 0.79 mg/l Measured with: Orion Instrument
Redox Potential: -154.3 Measured with: _____
Salinity: _____ Measured with: _____
Nitrate: _____ Measured with: _____
Sulfate: _____ Measured with: _____
Ferrous Iron: _____ Measured with: _____
Other: _____

7 [] SAMPLE CONTAINERS (material, number, size): 1 - Methane, H₂, Ar, and
2 - BTEX, VOC, TPH

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

[] Preservatives added:
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [] CONTAINER HANDLING:

☒ Container Sides Labeled
☐ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [] OTHER COMMENTS: _____

SAMPLING LOCATION MacDill AFBSAMPLING DATE(S) 7-21-95GROUND WATER SAMPLING RECORD - MONITORING WELL 24P2-15

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling:DATE AND TIME OF SAMPLING: 7-21 1995 1330 a.m./p.m.

SAMPLE COLLECTED BY: _____ of _____

WEATHER: Hot OVERCAST, 90° BREEZY 5-10 mphDATUM FOR WATER DEPTH MEASUREMENT (Describe): TGS

MONITORING WELL CONDITION:

☐ LOCKED:☒ UNLOCKEDWELL NUMBER (15) IS NOT APPARENT

STEEL CASING CONDITION IS: _____

INNER PVC CASING CONDITION IS: _____

WATER DEPTH MEASUREMENT DATUM (IS (15) NOT) APPARENT☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

1 ☒

EQUIPMENT CLEANED BEFORE USE WITH _____

Items Cleaned (List): _____

2 ☒PRODUCT DEPTH 11A

FT. BELOW DATUM

Measured with: _____

WATER DEPTH 2.70

FT. BELOW DATUM

Measured with: _____

3 ☒

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Light BrownOdor: None

Other Comments: _____

4 ☒

WELL EVACUATION:

Method: PERISTALTIC PumpVolume Removed: 4 GAObservations: Water (slightly) - very) cloudyWater level (rose - fell - no change)Water odors: None

Other comments: _____

FIGURE 3.8

GROUND WATER
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Ground Water Sampling Record - Monitoring Well No. 24P2-15 (Cont'd)

5[X] SAMPLE EXTRACTION METHOD:

☐ Bailer made of: _____
☐ Pump, type: _____
☒ Other, describe: PERISTALTIC PUMP

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6[X] ON-SITE MEASUREMENTS:

Temp: <u>26.7</u> °C	Measured with: <u>YSI 55</u>
pH: <u>6.83</u>	Measured with: <u>ORION 250A</u>
Conductivity: <u>10.55</u>	Measured with: <u>EXTCH</u>
Dissolved Oxygen: <u>1.25</u>	Measured with: <u>YSI 55</u>
Redox Potential: <u>16.2%</u>	Measured with: <u>YSI 55</u>
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: <u>0.2 PPM</u>	Measured with: <u>CHEMETS KIT</u>
Other: _____	_____

7[] SAMPLE CONTAINERS (material, number, size): _____


8[] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9[X] CONTAINER HANDLING:

☒ Container Sides Labeled
☒ Container Lids Taped
☒ Containers Placed in Ice Chest

10[X] OTHER COMMENTS:
24P2-15 at 1330FIGURE 3.8
(Continued)
GROUND WATER
SAMPLING RECORDIntrinsic Remediation TS
MacDill Air Force Base, Florida **PARSONS
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Denver, Colorado

SAMPLING LOCATION MacDell AFB
 SAMPLING DATE(S) 7-21-95

GROUND WATER SAMPLING RECORD - MONITORING WELL 24P2-25

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 7-21, 1995 1230 a.m./p.m.

SAMPLE COLLECTED BY: _____ of _____

WEATHER: Hot overcast 90° Breeze 5-10 mph

DATUM FOR WATER DEPTH MEASUREMENT (Describe): TOC

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS) IS NOT APPARENT

STEEL CASING CONDITION IS: _____

INNER PVC CASING CONDITION IS: _____

WATER DEPTH MEASUREMENT DATUM (IS) IS NOT APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

- 1 ☒ EQUIPMENT CLEANED BEFORE USE WITH _____
 Items Cleaned (List): _____
- 2 ☒ PRODUCT DEPTH NA FT. BELOW DATUM
 Measured with: _____
- WATER DEPTH 0.35 FT. BELOW DATUM
 Measured with: _____
- 3 ☒ WATER-CONDITION BEFORE WELL EVACUATION (Describe):
 Appearance: _____
 Odor: _____
 Other Comments: _____
- 4 ☒ WELL EVACUATION:
 Method: PERISTALTIC PUMP
 Volume Removed: 4 GAL
 Observations: Water (slightly) very cloudy
 Water level (rose - fell - no change)
 Water odors: DONE
 Other comments: _____

FIGURE 3.8

GROUND WATER
 SAMPLING RECORD

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SAMPLING LOCATION Mac Dill AFB
 SAMPLING DATE(S) 7-21-95

GROUND WATER SAMPLING RECORD - MONITORING WELL 24P2-3D

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 7-21, 1995 1400 a.m./p.m.

SAMPLE COLLECTED BY: _____ of _____

WEATHER: Mac, overcast 90° SSE 24 5-10 mph

DATUM FOR WATER DEPTH MEASUREMENT (Describe): TOL

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS) IS NOT APPARENT

STEEL CASING CONDITION IS: _____

INNER PVC CASING CONDITION IS: _____

WATER DEPTH MEASUREMENT DATUM (IS - IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

1 ☒

EQUIPMENT CLEANED BEFORE USE WITH _____

Items Cleaned (List): _____

2 ☒

PRODUCT DEPTH 10

FT. BELOW DATUM

Measured with: _____

WATER DEPTH 0

FT. BELOW DATUM

Measured with: _____

3 ☒

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Light Brown

Odor: None

Other Comments: _____

4 ☒

WELL EVACUATION:

Method: PERISTALTIC PUMP

Volume Removed: 3.5 Gal

Observations: Water (lightly - very) cloudy

Water level (rose - fell - no change)

Water odors: None

Other comments: _____

FIGURE 3.8

GROUND WATER
SAMPLING RECORD

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Ground Water Sampling Record - Monitoring Well No. 24P2-3D (Cont'd)

5 [] SAMPLE EXTRACTION METHOD:

[] Bailer made of: _____
 [] Pump, type: _____
 [] Other, describe: _____

Sample obtained is [] GRAB: [] COMPOSITE SAMPLE

6 [] ON-SITE MEASUREMENTS:

Temp: _____	Measured with: _____
pH: _____	Measured with: _____
Conductivity: _____	Measured with: _____
Dissolved Oxygen: _____	Measured with: _____
Redox Potential: _____	Measured with: _____
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: _____	Measured with: _____
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

[] Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

[] Preservatives added:

Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9 [] CONTAINER HANDLING:

[] Container Sides Labeled
 [] Container Lids Taped
 [] Containers Placed in Ice Chest

10 [] OTHER COMMENTS _____

FIGURE 3.8
 (Continued)
 GROUND WATER
 SAMPLING RECORD

Intrinsic Remediation TS
 MacDill Air Force Base, Florida

 **PARSONS
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 Denver, Colorado

SAMPLING LOCATION MacDell AFB
SAMPLING DATE(S) 7-21-95

GROUND WATER SAMPLING RECORD - MONITORING WELL 24 PZ-35
(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling:
DATE AND TIME OF SAMPLING: 7-21, 1995 0915 a.m./p.m.
SAMPLE COLLECTED BY: _____ of _____
WEATHER: Hot overcast, 90° Breezy 5-10 mph
DATUM FOR WATER DEPTH MEASUREMENT (Describe): TOL

MONITORING WELL CONDITION:

☐ LOCKED: ☒ UNLOCKED
WELL NUMBER (IS) IS NOT APPARENT
STEEL CASING CONDITION IS: _____
INNER PVC CASING CONDITION IS: _____
WATER DEPTH MEASUREMENT DATUM (IS) IS NOT APPARENT
☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR
☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

- 1 ☒ EQUIPMENT CLEANED BEFORE USE WITH _____
Items Cleaned (List): _____
- 2 ☒ PRODUCT DEPTH NA FT. BELOW DATUM
Measured with: _____
- WATER DEPTH 0 FT. BELOW DATUM
Measured with: _____
- 3 ☒ WATER-CONDITION BEFORE WELL EVACUATION (Describe):
Appearance: Dark Brown
Odor: None
Other Comments: _____
- 4 ☒ WELL EVACUATION:
Method: PERISTALTIC PUMP
Volume Removed: 5 Gal
Observations: Water (slightly) - very cloudy
Water level (rose - fell - no change)
Water odors: None
Other comments: _____

FIGURE 3.8

GROUND WATER
SAMPLING RECORD

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Ground Water Sampling Record - Monitoring Well No. 24P2-35 (Cont'd)

5[A] SAMPLE EXTRACTION METHOD:

- ☐ Sailer made of: _____
☐ Pump, type: _____
☒ Other, describe: PERISTALTIC PUMP

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6[W] ON-SITE MEASUREMENTS:

Temp: <u>28.0</u> °C	Measured with: <u>YSI 55</u>
pH: <u>7.26</u>	Measured with: <u>OREON 250A</u>
Conductivity: <u>13.80</u>	Measured with: <u>TEATECH</u>
Dissolved Oxygen: <u>1.54</u>	Measured with: <u>YSI 55</u>
Redox Potential: <u>19.59</u>	Measured with: <u>YSI 55</u>
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: <u>0.2</u> ppm	Measured with: <u>CHEMETS KIT</u>
Other: _____	_____

7[] SAMPLE CONTAINERS (material, number, size):

8[] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

☐ Preservatives added:

Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____
 Method _____ Containers: _____

9[A] CONTAINER HANDLING:

- ☒ Container Sides Labeled
☒ Container Lids Taped
☒ Containers Placed in Ice Chest

10[A] OTHER COMMENTS:

24P2-35 at 0915
24P2-35n31 at 0925
24P2-35n32 at 0940

FIGURE 3.8
 (Continued)
 GROUND WATER
 SAMPLING RECORD

Intrinsic Remediation TS
 MacDill Air Force Base, Florida



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Denver, Colorado

SAMPLING LOCATION MacDill AFB
 SAMPLING DATE(S) 7-21-95

GROUND WATER SAMPLING RECORD - MONITORING WELL 24P2-45

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling:

DATE AND TIME OF SAMPLING: 7-21, 1995 1115 AM/p.m.

SAMPLE COLLECTED BY: _____ of _____

WEATHER: Hot overcast 96° Breezy 5-10 mph

DATUM FOR WATER DEPTH MEASUREMENT (Describe): TGC

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (S) IS NOT APPARENT

STEEL CASING CONDITION IS: _____

INNER PVC CASING CONDITION IS: _____

WATER DEPTH MEASUREMENT DATUM IS (S NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off

1 ☒

EQUIPMENT CLEANED BEFORE USE WITH _____

Items Cleaned (List): _____

2 ☒

PRODUCT DEPTH ND

FT. BELOW DATUM

Measured with: _____

WATER DEPTH 0.5

FT. BELOW DATUM

Measured with: _____

3 ☒

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Light Brown

Odor: None

Other Comments: _____

4 ☒

WELL EVACUATION:

Method: PERISTALTIC PUMP

Volume Removed: 4 Gal

Observations: Water (slightly) very cloudy

Water level (rose - fell no change)

Water odors: None

Other comments: _____

FIGURE 3.8

GROUND WATER
SAMPLING RECORD

Intrinsic Remediation TS
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Ground Water Sampling Record - Monitoring Well No. 24PZ-45 (Cont'd)

5 [X] SAMPLE EXTRACTION METHOD:

- ☐ Sailer made of _____
☐ Pump, type _____
☒ Other, describe Pressure Pump

Sample obtained is ☒ GRAB: ☐ COMPOSITE SAMPLE

6 [X] ON-SITE MEASUREMENTS:

Temp: <u>29.2</u> °C	Measured with: <u>YSI 55</u>
pH: <u>7.23</u>	Measured with: <u>Oregon 250A</u>
Conductivity: <u>216</u>	Measured with: <u>FATECH</u>
Dissolved Oxygen: <u>1.2</u>	Measured with: <u>YSI 55</u>
Redox Potential: <u>16.57</u>	Measured with: <u>YSI 55</u>
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: <u>0.2 ppm</u>	Measured with: <u>QUESTAR V-11</u>
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size):

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added:

Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [X] CONTAINER HANDLING:

- ☒ Container Sides Labeled
☒ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [X] OTHER COMMENTS:
24PZ-45 at 1050
24PZ-45 at 1115

FIGURE 3.8
(Continued)
GROUND WATER
SAMPLING RECORD

Intrinsic Remediation TS
MacDill Air Force Base, Florida



PARSONS
ENGINEERING SCIENCE, INC.

Denver, Colorado

SAMPLING LOCATION MacDill AFB
 SAMPLING DATE(S) 7-21-95

GROUND WATER SAMPLING RECORD - MONITORING WELL 24P2-55

(number)

REASON FOR SAMPLING: ☒ Regular Sampling; ☐ Special Sampling;

DATE AND TIME OF SAMPLING: 7-21 1995 1030 a.m./p.m.

SAMPLE COLLECTED BY: _____ of _____

WEATHER: Hot overcast 90° BREEZY 5-10 mph

DATUM FOR WATER DEPTH MEASUREMENT (Describe): Tot.

MONITORING WELL CONDITION:

☐ LOCKED:

☒ UNLOCKED

WELL NUMBER (IS) IS NOT APPARENT

STEEL CASING CONDITION IS: _____

INNER PVC CASING CONDITION IS: _____

WATER DEPTH MEASUREMENT DATUM IS (IS NOT) APPARENT

☐ DEFICIENCIES CORRECTED BY SAMPLE COLLECTOR

☐ MONITORING WELL REQUIRED REPAIR (describe): _____

Check-off:

1 ☒

EQUIPMENT CLEANED BEFORE USE WITH _____

Items Cleaned (List): _____

2 ☒

PRODUCT DEPTH 4.0 FT. BELOW DATUM

Measured with: _____

WATER DEPTH 0.95 FT. BELOW DATUM

Measured with: _____

3 ☒

WATER-CONDITION BEFORE WELL EVACUATION (Describe):

Appearance: Light Brown

Odor: NONE

Other Comments: _____

4 ☒

WELL EVACUATION:

Method: PERISTALTIC PUMP

Volume Removed: 4 GGL

Observations: Water (slightly) very cloudy

Water level (rose - fell no change)

Water odors: NONE

Other comments: _____

FIGURE 3.8

GROUND WATER
SAMPLING RECORD

Intrinsic Remediation TS
MacDill Air Force Base, Florida



PARSONS
ENGINEERING SCIENCE, INC.

Denver, Colorado

Ground Water Sampling Record - Monitoring Well No. 24P2-55 (Cont'd)

5 [X] SAMPLE EXTRACTION METHOD:

- ☐ Bailer made of: _____
☐ Pump, type: _____
☒ Other, describe: Peristaltic Pump

Sample obtained is ☒ GRAB; ☐ COMPOSITE SAMPLE

6 [X] ON-SITE MEASUREMENTS:

Temp: <u>30.35</u>	Measured with: <u>YSI 55</u>
pH: <u>7.03</u>	Measured with: <u>Oregon 250A</u>
Conductivity: <u>11.80</u>	Measured with: <u>ESTECU</u>
Dissolved Oxygen: <u>4.5</u>	Measured with: <u>YSI 55</u>
Redox Potential: <u>39.7</u>	Measured with: <u>YSI 55</u>
Salinity: _____	Measured with: _____
Nitrate: _____	Measured with: _____
Sulfate: _____	Measured with: _____
Ferrous Iron: <u>0.4 ppm</u>	Measured with: <u>CHEMETS YSI</u>
Other: _____	_____

7 [] SAMPLE CONTAINERS (material, number, size): _____

8 [] ON-SITE SAMPLE TREATMENT:

☐ Filtration: Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

☐ Preservatives added: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____
Method _____ Containers: _____

9 [X] CONTAINER HANDLING:

- ☒ Container Sides Labeled
☒ Container Lids Taped
☒ Containers Placed in Ice Chest

10 [X] OTHER COMMENTS: _____

FIGURE 3.8
(Continued)
**GROUND WATER
SAMPLING RECORD**

Intrinsic Remediation TS
MacDill Air Force Base, Florida

 **PARSONS
ENGINEERING SCIENCE, INC.**
Denver, Colorado

residual = observed - calculated
 weighted residual = residual * weight

Weighted Residual Statistics:

Number of residuals..... 188
 Number of estimated parameters.... 2
 Degrees of freedom..... 186
 Residual mean..... 0.00537
 Residual standard deviation..... 0.01387
 Residual variance..... 0.0001925

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.2	1.952	1.9152	0.036794	1
0.23	1.91	1.8792	0.031771	1
0.27	1.867	1.83	0.036966	1
0.3	1.817	1.7947	0.022299	1
0.33	1.774	1.7601	0.013949	1
0.37	1.732	1.7149	0.017112	1
0.4	1.69	1.6818	0.0082212	1
0.43	1.656	1.6493	0.0066916	1
0.47	1.614	1.607	0.0070124	1
0.5	1.58	1.576	0.0040388	1
0.53	1.546	1.5455	0.00046611	1
0.57	1.513	1.5059	0.0071241	1
0.6	1.479	1.4768	0.0021983	1
0.63	1.445	1.4483	-0.0032889	1
0.67	1.411	1.4111	-0.00012622	1
0.7	1.377	1.3839	-0.0068814	1
0.73	1.344	1.3572	-0.013163	1
0.77	1.318	1.3223	-0.0043381	1
0.8	1.293	1.2968	-0.0038075	1
0.83	1.259	1.2718	-0.01277	1
0.87	1.234	1.2391	-0.0051366	1
0.9	1.208	1.2152	-0.0072124	1
0.93	1.183	1.1918	-0.0087501	1
0.97	1.158	1.1612	-0.0031701	1
1	1.132	1.1388	-0.0067512	1
1.03	1.099	1.1168	-0.017765	1
1.07	1.082	1.0881	-0.0061093	1
1.1	1.056	1.0671	-0.011101	1
1.13	1.031	1.0465	-0.015498	1
1.17	1.014	1.0196	-0.0056454	1
1.2	0.989	0.99996	-0.010959	1
1.23	0.963	0.98065	-0.017653	1
1.27	0.946	0.95549	-0.0094893	1
1.3	0.921	0.93704	-0.016042	1
1.33	0.904	0.91895	-0.01495	1
1.37	0.887	0.89537	-0.0083699	1
1.4	0.862	0.87808	-0.016083	1
1.43	0.845	0.86113	-0.01613	1
1.47	0.828	0.83903	-0.011033	1
1.5	0.803	0.82283	-0.019834	1
1.53	0.794	0.80695	-0.012947	1
1.57	0.777	0.78624	-0.0092413	1
1.6	0.761	0.77106	-0.010061	1
1.63	0.744	0.75617	-0.012174	1

1.67	0.727	0.73677	-0.009771	1
1.7	0.71	0.72255	-0.012546	1
1.73	0.693	0.7086	-0.015596	1
1.77	0.676	0.69041	-0.014413	1
1.8	0.659	0.67708	-0.018083	1
1.83	0.651	0.66401	-0.013011	1
1.87	0.642	0.64697	-0.0049725	1
1.9	0.625	0.63448	-0.0094813	1
1.93	0.608	0.62223	-0.014231	1
1.97	0.6	0.60626	-0.006265	1
2	0.583	0.59456	-0.01156	1
2.03	0.575	0.58308	-0.0080805	1
2.07	0.566	0.56812	-0.0021188	1
2.1	0.549	0.55715	-0.00815	1
2.13	0.541	0.54639	-0.005393	1
2.17	0.524	0.53237	-0.0083727	1
2.2	0.507	0.52209	-0.015094	1
2.23	0.499	0.51201	-0.013014	1
2.27	0.499	0.49888	0.00012416	1
2.3	0.482	0.48924	-0.007244	1
2.33	0.465	0.4798	-0.014798	1
2.37	0.456	0.46749	-0.011487	1
2.4	0.448	0.45846	-0.010461	1
2.43	0.448	0.44961	-0.0016091	1
2.47	0.431	0.43807	-0.0070723	1
2.5	0.431	0.42961	0.0013856	1
2.53	0.406	0.42132	-0.01532	1
2.57	0.406	0.41051	-0.0045088	1
2.6	0.397	0.40258	-0.005583	1
2.63	0.389	0.39481	-0.0058103	1
2.67	0.38	0.38468	-0.0046796	1
2.7	0.38	0.37725	0.0027475	1
2.73	0.363	0.36997	-0.0069688	1
2.77	0.363	0.36048	0.0025245	1
2.8	0.347	0.35352	-0.0065158	1
2.83	0.347	0.34669	0.00030962	1
2.87	0.338	0.33779	0.00020559	1
2.9	0.33	0.33127	-0.0012726	1
2.93	0.321	0.32488	-0.0038766	1
2.97	0.321	0.31654	0.0044596	1
3	0.313	0.31043	0.0025711	1
3.03	0.304	0.30444	-0.00043538	1
3.07	0.304	0.29662	0.0073763	1
3.1	0.296	0.2909	0.0051033	1
3.13	0.287	0.28528	0.0017197	1
3.17	0.279	0.27796	0.0010399	1
3.2	0.279	0.27259	0.0064065	1
3.23	0.27	0.26733	0.0026695	1
3.27	0.262	0.26047	0.0015292	1
3.3	0.262	0.25544	0.0065581	1
3.33	0.254	0.25051	0.00349	1
3.37	0.254	0.24408	0.009918	1
3.4	0.245	0.23937	0.0056305	1
3.43	0.245	0.23475	0.010252	1
3.47	0.237	0.22872	0.0082756	1
3.5	0.228	0.22431	0.0036917	1
3.53	0.228	0.21998	0.0080224	1
3.57	0.22	0.21433	0.005667	1
3.6	0.211	0.21019	0.00080514	1
3.63	0.211	0.20614	0.0048634	1

3.67	0.203	0.20085	0.0021528	1
3.7	0.203	0.19697	0.0060306	1
3.73	0.203	0.19317	0.0098335	1
3.77	0.194	0.18821	0.0057901	1
3.8	0.194	0.18458	0.0094239	1
3.83	0.194	0.18101	0.012988	1
3.87	0.186	0.17637	0.0096323	1
3.9	0.178	0.17296	0.0050374	1
3.93	0.178	0.16962	0.0083769	1
3.97	0.169	0.16527	0.0037293	1
4	0.169	0.16208	0.0069203	1
4.03	0.169	0.15895	0.01005	1
4.07	0.169	0.15487	0.014128	1
4.1	0.161	0.15188	0.0091183	1
4.13	0.161	0.14895	0.012051	1
4.17	0.161	0.14513	0.015873	1
4.2	0.152	0.14233	0.0096747	1
4.23	0.152	0.13958	0.012423	1
4.27	0.152	0.136	0.016004	1
4.3	0.152	0.13337	0.01863	1
4.33	0.144	0.1308	0.013205	1
4.37	0.135	0.12744	0.007561	1
4.4	0.135	0.12498	0.010021	1
4.43	0.135	0.12257	0.012434	1
4.47	0.135	0.11942	0.015579	1
4.5	0.135	0.11711	0.017885	1
4.53	0.127	0.11485	0.012146	1
4.57	0.127	0.11191	0.015093	1
4.6	0.127	0.10975	0.017254	1
4.63	0.127	0.10763	0.019373	1
4.67	0.118	0.10487	0.013135	1
4.7	0.118	0.10284	0.015159	1
4.73	0.118	0.10086	0.017145	1
4.77	0.11	0.098267	0.011733	1
4.8	0.11	0.09637	0.01363	1
4.83	0.11	0.094509	0.015491	1
4.87	0.11	0.092084	0.017916	1
4.9	0.11	0.090306	0.019694	1
4.93	0.11	0.088563	0.021437	1
4.97	0.101	0.08629	0.01471	1
5	0.101	0.084624	0.016376	1
5.03	0.101	0.082991	0.018009	1
5.07	0.101	0.080861	0.020139	1
5.1	0.093	0.0793	0.0137	1
5.13	0.093	0.077769	0.015231	1
5.17	0.093	0.075773	0.017227	1
5.2	0.093	0.07431	0.01869	1
5.23	0.093	0.072876	0.020124	1
5.27	0.085	0.071006	0.013994	1
5.3	0.085	0.069635	0.015365	1
5.33	0.085	0.06829	0.01671	1
5.37	0.085	0.066538	0.018462	1
5.4	0.085	0.065253	0.019747	1
5.43	0.085	0.063993	0.021007	1
5.47	0.076	0.062351	0.013649	1
5.5	0.076	0.061147	0.014853	1
5.53	0.076	0.059967	0.016033	1
5.57	0.076	0.058428	0.017572	1
5.6	0.076	0.0573	0.0187	1
5.63	0.076	0.056194	0.019806	1

residual = observed - calculated
 weighted residual = residual * weight

Weighted Residual Statistics:

Number of residuals..... 42
 Number of estimated parameters.... 2
 Degrees of freedom..... 40
 Residual mean..... 0.01407
 Residual standard deviation..... 0.05893
 Residual variance..... 0.003473

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.13	2.121	1.9802	0.14084	1
0.17	1.918	1.8231	0.094857	1
0.2	1.749	1.7136	0.035394	1
0.23	1.597	1.6107	-0.01365	1
0.27	1.47	1.4829	-0.012933	1
0.3	1.352	1.3938	-0.041837	1
0.33	1.251	1.3101	-0.059093	1
0.37	1.158	1.2062	-0.048209	1
0.4	1.073	1.1337	-0.060738	1
0.43	0.997	1.0656	-0.068622	1
0.47	0.921	0.98112	-0.060123	1
0.5	0.862	0.92218	-0.060176	1
0.53	0.803	0.86677	-0.06377	1
0.57	0.752	0.79804	-0.046039	1
0.6	0.702	0.75009	-0.048092	1
0.63	0.659	0.70503	-0.046025	1
0.67	0.617	0.64912	-0.03212	1
0.7	0.583	0.61012	-0.02712	1
0.73	0.549	0.57346	-0.024463	1
0.77	0.516	0.52799	-0.01199	1
0.8	0.482	0.49627	-0.014268	1
0.83	0.457	0.46645	-0.0094515	1
0.87	0.44	0.42946	0.010536	1
0.9	0.414	0.40366	0.010339	1
0.93	0.397	0.37941	0.017591	1
0.97	0.372	0.34932	0.022677	1
1	0.355	0.32834	0.026664	1
1.03	0.338	0.30861	0.029391	1
1.07	0.33	0.28414	0.045863	1
1.1	0.304	0.26707	0.036934	1
1.13	0.296	0.25102	0.04498	1
1.17	0.279	0.23112	0.047884	1
1.2	0.271	0.21723	0.05377	1
1.23	0.271	0.20418	0.066822	1
1.27	0.262	0.18799	0.074012	1
1.3	0.245	0.17669	0.068307	1
1.33	0.245	0.16608	0.078923	1
1.37	0.237	0.15291	0.084092	1
1.4	0.228	0.14372	0.084279	1
1.43	0.22	0.13509	0.084914	1
1.47	0.211	0.12437	0.086625	1
1.5	0.211	0.1169	0.094098	1

=====

CLIENT: AFCEE

COMPANY: PARSONS ENGINEERING SCIENCE

LOCATION: MACDILL AIR FORCE BASE

PROJECT: 722450.21050

RISING HEAD SLUG TEST MD24-MW10A

DATA SET:
DT10A01.AQT
12/05/95

AQUIFER MODEL:
Unconfined

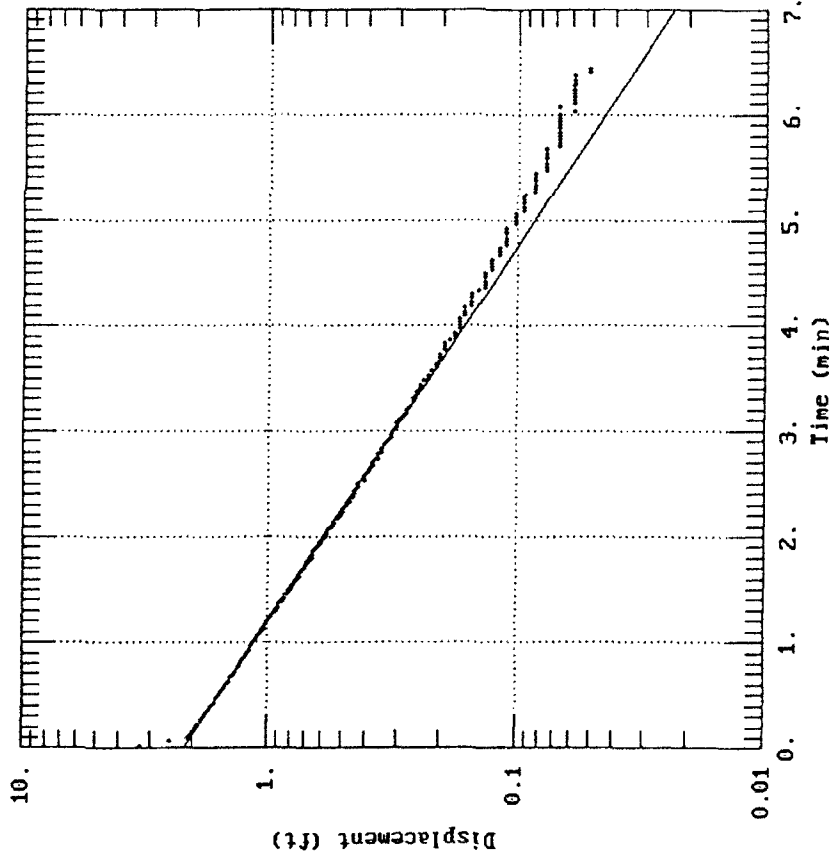
SOLUTION METHOD:
Bouwer-Rice

TEST DATA:

H0 = 3.262 ft
rc = 0.08333 ft
rw = 0.25 ft
L = 5. ft
b = 26.5 ft
H = 26.5 ft

PARAMETER ESTIMATES:

K = 0.004811 ft/min
y0 = 2.181 ft



AQTESOLU

Developed by Glenn M. Duffield
(c) 1988-1995 Geraghty & Miller, Inc.

09:01:33

```
Data set..... OT10AR1.AQT
Output file..... OT10AR1.OUT
Data set title..... RISING HEAD SLUG TEST MD24-MW10A
Company..... PARSONS ENGINEERING SCIENCE
Project..... 722450.21050
Client..... AFCEE
Location..... MACDILL AIR FORCE BASE
Test date..... 3-24-95
Test well..... MD24-MW10A
```

Length..... ft
Time..... min

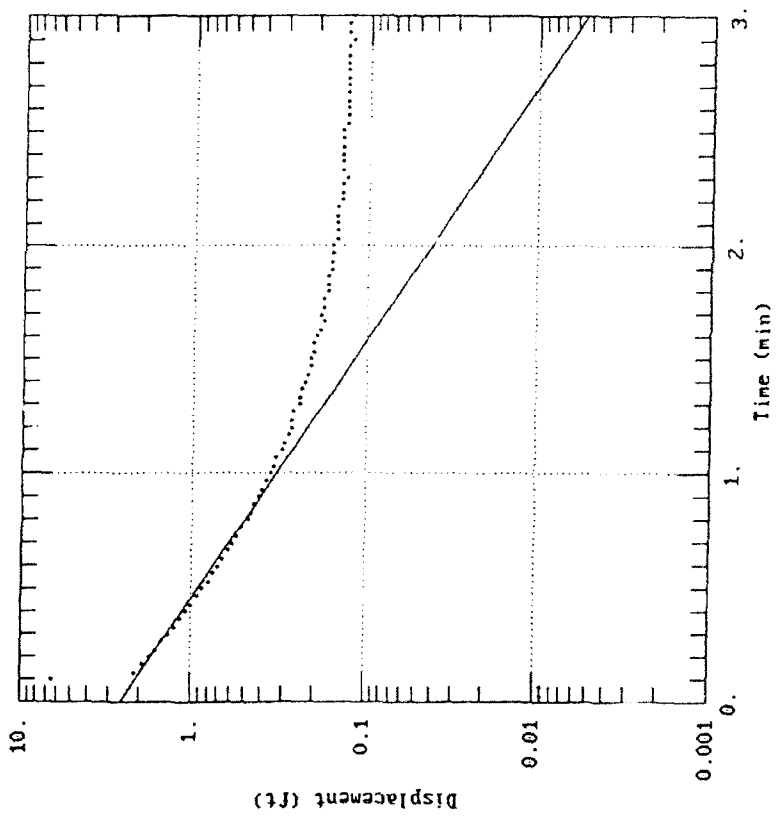
Initial displacement in well.....	3.262		
Radius of well casing.....	0.08333		
Radius of wellbore.....	0.25		
Aquifer saturated thickness.....	26.5		
Well screen length.....	5		
Static height of water in well...	26.5		
Gravel pack porosity.....	0.3		
Effective well casing radius.....	0.1537		
Effective wellbore radius.....	0.25		
Log(Re/Rw).....	3.136		
Constants A, B and C.....	0.000	0.000,	1.661
No. of observations.....	193		

Bouwer-Rice (Unconfined Aquifer Slug Test)

	Estimate	Std. Error
K =	4.8114E-003 +/-	1.4655E-005 ft/min
y0 =	2.1810E+000 +/-	5.2222E-003 ft

ANALYSIS OF MODEL RESIDUALS

CLIENT: AFCEE	COMPANY: PARSONS ENGINEERING SCIENCE
LOCATION: MACDILL AIR FORCE BASE	PROJECT: 722450.21050
<h3 style="text-align: center;">RISING HEAD SLUG TEST MD24-MW4</h3>	
<p>DATA SET: DT244R2.AQT 12/05/95</p>	
<p>AQUIFER MODEL: Unconfined</p>	
<p>SOLUTION METHOD: Bouwer-Rice</p>	
<p>TEST DATA: $H_0 = 6.464 \text{ ft}$ $r_c = 0.08333 \text{ ft}$ $r_w = 0.3333 \text{ ft}$ $L = 10. \text{ ft}$ $b = 26. \text{ ft}$ $H = 17.48 \text{ ft}$ </p>	
<p>PARAMETER ESTIMATES: $K = 0.009805 \text{ ft/min}$ $y_0 = 2.59 \text{ ft}$ </p>	



NOTES/DU

ANALYSIS OF MODEL RESIDUALS

MacDill Air Force Base Site 24 Coodinate Data

April 4, 1995

Point	Identification	North	East	Elevation
1	NVZR 13	1280120.4750	485499.2540	6.44
2	NVZR 14 AZ MK	1279899.9680	484902.3800	5.69
3	SET H/T	1279773.7806	484807.9739	5.65
4	SET H/T	1279571.8301	484748.0510	6.00
5	SET H/T	1279608.1830	484614.3683	4.18
6	SET H/T	1279900.6182	484596.4411	5.88
7	CK.IN	1279899.9340	484902.4512	5.88
8	CK.IN	1279773.7732	484808.0364	5.84
100	0 SET	1280120.4811	485499.2704	6.46
101	0 SET	1279899.9464	484902.3639	5.72
102	0 SET	1279773.7909	484807.9770	5.71
103	0 SET	1279571.8182	484748.0945	6.07
104	0 SET	1279608.1870	484614.3680	4.32
105	0 SET	1279900.6182	484596.4370	6.02
200	MD 24-3	1279875.9536	484638.6314	8.23
201	Ground Shot	1279875.9174	484639.1526	5.15
202	Building.	1279864.5428	484663.1942	6.08
203	Building.	1279864.5502	484733.9619	5.77
204	Building.	1279856.0298	484734.5623	5.86
205	Building.	1279855.8815	484754.7661	5.63
206	MD 24-4	1279878.9429	484743.3868	8.51
207	Ground Shot	1279879.5252	484743.7377	5.62
208	24MP-4S	1279857.9828	484852.3484	5.38
209	Ground Shot	1279856.8388	484852.0624	5.42
210	Building.	1279850.1052	484818.3598	5.66
211	Building.	1279850.4123	484806.1610	5.65
212	MD 24-5	1279818.8316	484801.6616	4.89
213	Ground Shot	1279818.5261	484800.2598	5.11
214	Building. 1121 W. Corner.	1279818.5587	484754.8929	5.57
215	MD 24-2	1279811.1229	484752.0674	8.03
216	Ground Shot	1279811.6357	484752.4000	5.57
217	OB-1	1279803.8401	484752.1021	4.99
218	Ground Shot	1279801.7997	484751.9364	5.49
219	PW EAST Ground Shot	1279802.8852	484729.5117	5.81
220	24MP-15-1D	1279794.7348	484712.3817	5.58
221	Ground Shot	1279796.0309	484713.1116	5.66
222	PW WEST Ground Shot	1279793.5242	484689.6954	5.51
223	24MP-2S-2D	1279782.4939	484683.8101	4.94
224	Ground Shot	1279783.5399	484684.3627	5.25
225	24SS-1 Ground Shot	1279797.3406	484657.7907	5.56

Prepared by: **Landmark Engineering & Surveying Corporation**

For: **PARSONS ENGINEERING SCIENCE, INC.**

MacDill Air Force Base Site 24 Coodinate Data

April 4, 1995

Point	Identification	North	East	Elevation
226	MD 24-1	1279799.5076	484629.3807	8.88
227	Ground Shot	1279800.0073	484629.6563	5.25
228	24SS-2 Ground Shot	1279733.5106	484661.7299	3.43
229	24MP-9S-9D	1279731.6126	484668.8283	3.60
230	Ground Shot	1279730.5784	484669.5368	3.84
231	MD 24-6A	1279743.3054	484718.2382	4.70
232	Ground Shot	1279741.7084	484720.4505	4.92
233	MD 24-6	1279740.4868	484722.5782	4.40
234	24MP-6S	1280097.2143	485064.7488	4.50
235	Ground Shot	1280097.3281	485063.0030	4.60
236	24MP-10S-10D	1279729.8381	484796.1090	4.20
237	Ground Shot	1279728.7192	484795.9779	4.10
238	MD 24-8	1279663.2231	484767.7001	4.36
239	Ground Shot	1279663.2064	484768.7444	4.59
240	24PZ-1D	1279591.4822	484694.8935	5.54
241	Ground Shot	1279591.9355	484694.1700	4.96
242	24PZ-1S	1279592.7636	484693.2163	6.32
243	24MD-10	1279634.0551	484584.9636	3.71
244	Ground Shot	1279637.6726	484585.3720	3.90
245	MD 24-10A	1279641.9951	484585.4691	3.66
246	24MP-3S-3D	1279726.2513	484585.6749	4.00
247	Ground Shot	1279725.6334	484585.7678	4.17
248	MD 24-7	1279708.0375	484626.3789	4.13
249	Ground Shot	1279707.6767	484625.0329	4.10
250	MD 24-9	1279796.2125	484587.7808	4.53
251	Ground Shot	1279795.5025	484587.1212	4.17
252	Building.1121 W.Corner.	1279833.6899	484663.2003	6.01
253	24MP-5S-5D	1279851.2005	484594.7399	5.19
254	Ground Shot	1279851.4422	484595.8417	5.29
255	24MP-8S-8D	1279740.8298	484465.8387	4.15
256	Ground Shot	1279739.4371	484465.5132	4.26
257	24MP-7S-7D	1279685.6697	484489.9964	4.00
258	Ground Shot	1279684.0918	484489.0432	4.15

Prepared by: **Landmark Engineering & Surveying Corporation**
For: **PARSONS ENGINEERING SCIENCE, INC.**

MacDill Air Force Base Additional (August 1995) Data

8/15/95

Point	Identification	North	East	Elevation
4	TP H/T	1279571.8301	484748.0510	6.00
5	TP H/T	1279608.1830	484614.3683	4.18
6	TP H/T	1279900.6182	484596.4411	5.88
243	TP H/T	1279634.0600	484584.9600	6.00
245	TP H/T	1279641.9900	484585.4700	6.00
300	CK.BS.	1279571.8313	484748.0464	6.10
301	24PZ-3D	1279461.2865	484621.4605	3.82
302	24PZ-3D GS.	1279462.2917	484620.6656	3.75
303	24PZ-3S	1279458.8950	484621.4788	3.75
304	24PZ-3S GS.	1279458.8885	484620.4210	3.73
305	24PZ-5S	1279287.8874	484588.3585	4.40
306	24PZ-5S GS.	1279287.5561	484589.7581	4.53
307	24PZ-2S	1279507.4800	484542.4984	4.16
308	24PZ-2S GS.	1279507.3713	484544.1971	4.21
309	24PZ-4S	1279353.5830	484444.3158	4.43
310	24PZ-4S GS.	1279353.5659	484443.1560	4.46

Prepared by: **Landmark Engineering Surveying Corporation**

For: **PARSONS ENGINEERING SCIENCE, INC.**

Sheet 1 of 1

APPENDIX C
LABORATORY ANALYTICAL DATA

**MANTECH
TECHNOLOGY**

Ref: 95-DK16/vg

June 7, 1995

Dr. Don Kampbell
R.S. Kerr Environmental Research Lab
U.S. Environmental Protection Agency
P.O. Box 1198
Ada, OK 74820

THRU: S.A. Vandegrift *for SAV*

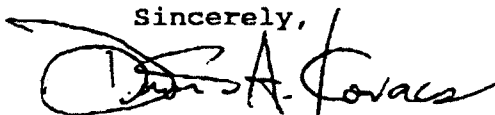
Dear Don:

This report contains the results of my GC/MSD analysis of one floating product sample (OT-24) from Patrick AFB for quantitation of benzene, toluene, ethylbenzene, p-Xylene, m-Xylene, o-Xylene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, 1,2,3-trimethylbenzene, 1,2,4,5-tetramethylbenzene, 1,2,3,5-tetramethylbenzene and 1,2,3,4-tetramethylbenzene performed under Service Request #SF-1-131. I also observed that naphthalene and methylated naphthalene species were abundant in this sample and have provided semiquantitative information for naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

The analytical method was a modification of RSKSOP-124. Cool (38°C) on-column injection (0.5 µl) was used with electronic pressure control set for a constant flow of 0.9 ml/min. A 30M X 0.25 mm Restek Stabilwax (Crossbonded Carbowax-PEG, 0.5 µm film) capillary GC column with 9 inch long X 0.53 mm ID uncoated capillary precolumn was used. Quantitation was based on calibration curves (0.05-50 µg/ml) of selected target ions (1 to 3 ions, total area) for each compound. Semiquantitation of naphthalene compounds was based on area ratios using 50 ug/ml standards. Complete reports detailing the acquisition method and calibration curves have been recorded. The sample was diluted 1/25 with methylene chloride and analyzed by GC/MSD on June 2, 1995.

If I can be of further assistance, please feel free to contact me.

Sincerely,



David A. Kovacs

xc: R.L. Cosby
J.L. Seeley *JS*
G.B. Smith

ManTech Environmental Research Services Corporation

R.S. Kerr Environmental Research Laboratory, P.O. Box 1198, 919 Kerr Research Drive
Ada, Oklahoma 74321-1198 405-436-8660 FAX 405-436-8501

<u>Compound</u>	<u>Amount (mg/L)</u>	<u>Compound</u>	<u>Amount (mg/L)</u>
Benzene	4.93E+00	1,2,3-Trimethylbenzene	5.85E+02
Toluene	ND	1,2,4,5-tetramethylbenzene	6.98E+02
Ethylbenzene	2.45E+00	1,2,3,5-tetramethylbenzene	1.88E+03
p-Xylene	6.10E+00	1,2,3,4-tetramethylbenzene	1.40E+03
m-Xylene	7.23E+00	Naphthalene	8.45E+02
o-Xylene	4.68E+00	1-methylnaphthalene	2.38E+03
1,3,5-Trimethylbenzene	2.43E+02	2-methylnaphthalene	1.75E+03
1,2,4-Trimethylbenzene	5.40E+02		

Printed: 6/7/95

MANTECH TECHNOLOGY

Ref: 95/JAD21

April 20, 1995

Dr. Don Kampbell
R.S. Kerr Environmental Research Lab
U.S. Environmental Protection Agency
P.O. Box 1198
Ada, OK 74820

THRU: S.A. Vandegrift^{SV}

Dear Don:

MacDill data a/s. included *MacDill AFB*
As requested in Service Request # SF-1-123, headspace GC/MS analysis of 90 Patrick AFB water samples for chlorinated VOAs (TCE, PCE, DCE's, and vinyl chloride) was completed. The samples were received on March 28 & April 6, 1995 and analyzed on April 6-11, 1995. RSKSOP-148 (Determination of Volatile Organic Compounds in Water by Automated Headspace Gas Chromatography/Mass Spectrometry (Saturn II Ion Trap Detector) was used for this analysis.

An internal standard calibration method was established for 6 chlorinated compounds. The standard curves were prepared from 1.0 to 5000 ppb. The lower calibration limits were 1.0 ppb.

A dilution corrected quantitation report for the samples, lab duplicates, field duplicates, QC standards and lab blanks is presented in tables 1-4.

If you should have any questions, please feel free to contact me.

Sincerely,

John Allen Daniel
John Allen Daniel

xc: R.L. Cosby
G.B. Smith
D.D. Fine
J.L. Seeley *JS*

ManTech Environmental Research Services Corporation

R.S. Kerr Environmental Research Laboratory, P.O. Box 1198, 919 Kerr Research Drive
Ada, Oklahoma 74821-1198 405-436-8660 FAX 405-436-8501

Table 1. Quantitation Report for S.R. # SF-1-123 from Patrick AFB.

Concentration = ppb

Compound	24MP-1D	24MP-1S	24MP-1S Lab Dup	24MP-1S Field Rep	24MP-2D	24MP-2S	24MP-3D	24MP-3S	24MP-4S	24MP-5D
VINYLCHLORIDE	ND	20.7	20.2	20.8	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	1.1	6.8	6.5	6.2	---	---	---	ND	ND	ND
TRICHLOROETHENE	ND	---	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	1.1	1.0	1.0	ND	ND	ND	ND	ND	ND
	24MP-5S	24MP-6S	24MP-7D	24MP-7D Lab Dup	24MP-7S	24MP-8D	24MP-8S	24MP-9D	24MP-9S	24MP-10D
VINYLCHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	24MP-10D Lab Dup	24MP-10S	24PZ-1D	24PZ-1S	24PZ-1S Field Rep	MD24-1	MD24-2	MD24-3	MD24-4	MD24-5
VINYLCHLORIDE	ND	ND	1.0	2.8	2.6	---	3.4	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	---	1.0	---	---	1.4	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	2.6	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	MD24-6A	MD24-6	MD24-7	MD24-7 Field Rep	MD24-7 Field Dup	MD24-8	MD24-9	MD24-9 Lab Dup	MD24-10	MD24-10A
VINYLCHLORIDE	16.4	---	1.2	1.5	1.6	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	---	ND	ND	ND	ND	ND	ND	---	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND = None Detected --- = Below Calibration Limit(1.0 ppb) Dup = Duplicate Rep = Replicate

Table 2. Quantitation Report for S.R. # SF-1-123 from Patrick AFB.

Concentration = ppb

Compound	MD24-41	MW32-1	MW32-3	MD32-MW7	56MP-1S	56MP-2S	56MP-3D	56MP-3S	56MP-4S 1/5 Dil	56MP-4S Field Rep
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MD32-MW10 2/12/15

ND = None Detected --- = Below Calibration Limit(1.0 ppb) Rep = Replicate Dup = Duplicate Dil = Dilution

Table 3. Quantitation Report for S.R. # SF-1-123 from Patrick AFB.

Concentration = ppb

Compound	75MP-5D FieldRep	75MP-6D	75MP-7D	75MP-7D LabDup	75MP-7S	75MP-8D	75MP-8S	75MP-8S FieldDup	75MP-9D	75MP-9S
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	MD75- MW2	MD75- MW3	MD75- MW4	MD75- MW4 LabDup	MD75- MW4 FieldRep	MD75- MW5	MD75- MW6	MD75- MW7	MD75- MW8	MD75- MW9
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	MD75- MW10	MD75- MW11	MD75- MW12	MD75- MW13	MD75- MW14	MD75- MW14 LabDup	MD75- MW14 FieldRep	MD75- MW15	MD75- MW16	Trip Blank
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	QC0406A	QC0406B	QC0406C	QC0406D	QC0406E	QC0406F	QC0406G	QC0406H	QC0408A	QC0408B
1,1-DICHLOROETHENE	20 ppb	200 ppb	20 ppb	200 ppb	20 ppb	200 ppb	20 ppb	200 ppb	20 ppb	200 ppb
T-1,2-DICHLOROETHENE	20.8	196	20.7	198	18.9	197	19.6	189	19.9	195
C-1,2-DICHLOROETHENE	20.3	199	19.9	197	18.4	198	18.7	196	19.1	196
T-1,2-DICHLOROETHENE	19.4	185	19.5	180	18.2	186	19.0	187	18.7	192
C-1,2-DICHLOROETHENE	19.2	196	20.2	196	19.5	187	20.4	198	20.8	201
TRICHLOROETHENE	21.2	210	22.1	210	19.9	214	21.1	208	21.3	213
TETRACHLOROETHENE	19.9	195	19.0	197	18.8	193	18.8	194	18.2	190

ND = None Detected --- = Below Calibration Limit(1.0 ppb) QC = Quality Control Std Dup = Duplicate Rep = Replicate

Table 4. Quantitation Report for S.R. # SF-1-123 from Patrick AFB.

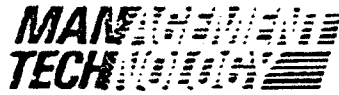
Concentration = ppb

Compound	QC0408C 20 ppb	QC0408D 200 ppb	QC0408E 20 ppb	QC0408F 200 ppb	QC0410A 20 ppb	QC0410B 200 ppb	QC0410C 20 ppb	QC0410D 200 ppb	QC0410E 20 ppb	BL0406A
VINYL CHLORIDE	20.9	198	21.0	188	21	191	19.2	194	20.9	ND
1,1-DICHLOROETHENE	18.7	200	19.7	196	19.8	189	19.1	200	20.0	ND
T-1,2-DICHLOROETHENE	19.0	189	19.2	181	18.6	181	19.6	192	19.1	ND
C-1,2-DICHLOROETHENE	19.8	203	19.0	193	19.2	194	19.9	199	19.3	ND
TRICHLOROETHENE	20.4	214	20.8	206	21.3	203	20.6	212	21.8	ND
TETRACHLOROETHENE	19.0	196	18.7	186	19.3	187	19.5	198	19.9	ND

BL0406B BL0408A BL0410A

VINYL CHLORIDE	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND
T-1,2-DICHLOROETHENE	ND	ND	ND
C-1,2-DICHLOROETHENE	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND

QC = Quality Control Std BL = Blank ND = None Detected



Ref: 95-JH29/vg

May 9, 1995

Dr. Don Kampbell
R.S. Kerr Environmental Research Lab
U.S. Environmental Protection Agency
P.O. Box 1198
Ada, OK 74820

THRU: S.A. Vandegrift ✓

Dear Don:

Find attached results for methane and ethylene on Patrick^{MacDill} AFB samples as per Service Request #SF-1-123. Samples were received on 3/27, 3/28, and 4/6 and analyzed on 3/27, 3/28, 3/30, 4/3, 4/4, 4/7, 4/10, and 4/11/95. Samples were prepared and calculations were done as per RSKSOP-175. Analysis was performed as per RSKSOP-147.

If you have any questions, please feel free to see me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jeff Hickerson".
Jeff Hickerson

xc: R.L. Cosby
J.L. Seeley
G.B. Smith

ManTech Environmental Research Services Corporation

R S Kerr Environmental Research Laboratory, P.O. Box 1198, 919 Kerr Research Drive
Ada, Oklahoma 74821-1198 405-436-8660 FAX 405-436-8501

SF-1-123 DATA

ANALYZED 3/27/95

SAMPLE	METHANE	ETHYLENE
LAB BLANK	BLQ	ND
2S	12.846	ND
* FIELD DUP	14.150	ND
3D	2.570	ND
3M	12.437	ND
3S	15.534	ND
86-16DD	0.074	ND
9D	9.839	ND
9S	5.822	ND
12D	0.882	ND
12S	12.339	ND
26D	3.756	ND
26S	9.009	ND
86-18D	6.116	ND

ANALYZED 3/28/95

SAMPLE	METHANE	ETHYLENE
LAB BLANK	BLQ	ND
86-21-MWD	0.749	ND
86MW-10D	1.598	ND
* FIELD DUP	1.560	ND
86MW-18S	3.379	ND
* LAB DUP	3.178	ND
86-18DD	0.068	ND
86-MW4D	5.095	ND
86-MW4S	11.630	ND
* LAB DUP	10.594	ND
86-21-MWS	9.857	ND

ANALYZED 3/30/95

SAMPLE	METHANE	ETHYLENE
LAB BLANK	BLQ	ND
24PZ-1S	4.177	ND
24MP-2S	9.887	ND
24MP-3D	0.182	ND
MD32-3	0.137	ND
MD24-4	0.266	ND
* LAB DUP	0.261	ND
MW56-6	6.324	ND
56-MP-6S	0.245	ND
24MP-7S	0.045	ND
56MP-7D	0.067	ND
MW56-8	2.298	ND
24MP-8D	0.068	ND
MD24-9	0.146	ND
24MP-1S	2.501	BLQ

SF-1-123 DATA

ANALYZED 3/30/95

SAMPLE	METHANE	ETHYLENE
24MP-1D	1.788	ND
24MP-2D	0.145	ND
MP24-4	0.288	ND
* LAB DUP	0.271	ND

ANALYZED 4/3/95

SAMPLE	METHANE	ETHYLENE
LAB BLANK	BLQ	ND
24PZ-1D	0.137	ND
MD56-MW9	0.739	ND
56MP-4S	8.968	ND
56MP-5D	0.568	ND
56MP-5S	13.574	ND
56MP-6D	0.086	ND
56MP-8S	0.032	ND
56MP-10S	2.288	ND
* LAB DUP	2.081	ND
56MP-15D	0.548	ND
MD24-1	0.573	ND
MD24-2	1.311	ND
MD24-3	0.242	ND
MD24-5	0.217	ND
MD24-6	0.610	ND
MD24-6A	2.335	0.001
MD24-7	0.429	ND

ANALYZED 4/4/95

SAMPLE	METHANE	ETHYLENE
LAB BLANK	BLQ	ND
MD24-7 FIELD DUP	0.048	ND
MD24-8	0.578	ND
MD24-10	0.249	ND
MD24-10A	0.749	ND
24MP-3S	0.970	ND
24MP-5D	0.075	ND
24MP-5S	0.065	ND
24MP-6S	1.045	ND
24MP-7D	0.033	ND
* LAB DUP	0.032	ND
24MP-8S	0.125	ND
24MP-9D	0.053	ND
24MP-9S	3.270	ND
24MP-10	0.696	ND
24MP-10D	0.060	ND
MW56-1	0.442	ND
MW56-2	0.492	ND

SF-1-123 DATA

ANALYZED 4/4/95

SAMPLE	METHANE	ETHYLENE
MW56-10	3.711	ND
* LAB DUP	3.513	ND
MW56-12	0.014	ND

ANALYZED 4/7/95

SAMPLE	METHANE	ETHYLENE
LAB BLANK	BLQ	ND
56MW-1	0.087	ND
MW56-5	0.136	ND
MW56-7	7.953	ND
MW56-11	5.279	ND
56MP-1S	0.161	ND
56MP-2S	0.030	ND
56MP-3D	1.069	ND
56MP-3S	0.092	ND
56MP-7D	0.035	ND
MD32-MW7	4.749	ND
* LAB DUP	4.545	ND

ANALYZED 4/10/95

SAMPLE	METHANE	ETHYLENE
LAB BLANK	BLQ	ND
MD56-MW4	0.034	ND
MW32-1	2.634	ND
MD75-MW2	0.271	ND
MD75-MW3	0.038	ND
MD75-MW4	1.890	BLQ
MD75-MW5	0.035	ND
MD75-MW9	2.245	ND
MD75-MW6	2.466	ND
* LAB DUP	2.351	ND
MD75-MW7	0.641	ND
MD75-MW8	8.962	ND
MD75-MW10	5.394	ND
MD75-MW11	0.986	ND
MD75-MW12	7.310	ND
MD75-MW13	1.227	ND
MD75-MW14	15.439	ND
MD75-MW15	0.050	ND
MD75-MW16	6.039	ND
75MP-2S	6.550	0.001
* LAB DUP	6.215	ND

SF-1-123 DATA

ANALYZED 4/11/95

SAMPLE	METHANE	ETHYLENE
LAB BLANK	BLQ	ND
75MP-3D	1.777	ND
* FIELD DUP	0.036	ND
75MP-4S	14.469	0.001
75MP-5D	7.361	ND
75MP-6D	8.613	ND
75MP-7D	0.437	ND
75MP-8D	0.038	ND
75MP-8S	0.042	ND
* LAB DUP	0.041	ND
75MP-9D	0.072	ND
75MP-9S	0.132	ND
75MP-28S	0.043	ND

STANDARDS

SAMPLE	METHANE	ETHYLENE
10 PPM CH4	9.71	ND
100 PPM CH4	100.03	ND
1000 PPM CH4	1044.51	ND
1% CH4	1.01	ND
10% CH4	9.63	ND
20% CH4	20.18	ND
10 PPM C2H4	ND	9.95
100 PPM C2H4	ND	100.00
1000 PPM C2H4	ND	999.62

LOWER LIMIT OF QUANTITATION

METHANE	ETHYLENE
0.001	0.003

UNITS FOR THE SAMPLES ARE mg/L.

UNITS FOR THE STANDARDS CORRESPOND
TO THE UNITS IN THE SAMPLE COLUMN.

ND DENOTES NONE DETECTED.

BLQ DENOTES BELOW LIMIT OF QUANTITATION.

Note
I would round off the
reported values to two significant
digits. Don Campbell

Evergreen Analytical Sample Log Sheet

Project # 95-0861

Date(s) Sampled: 03/15,16/95 COC

Date Due: 03/22/95

Date Received: 03/17/95 1000

Holding Time(s): 3/17,18-NO₂,NO₃,3/2

BTEX,TVH,3/29,30-A

Client Project I.D. 722450.21020/MacDILL AFB

Rush STANDARD-1ST
2-OTHERS

Client: Parsons Engineering Science, Inc.

Shipping Charges N/A

Address: 1700 Broadway Suite 900

E.A. Cooler # 383

Denver, CO 80290

Airbill # FEDEX 9581826192

Contact: TODD WIEDEMEIER

Custody Seal Intact? N/A

Cooler Bottles

Client P.O. 722450.21020

COC Present Y

Phone #831-8100 Fax #831-8208

Sample Tags Present? Y

Sample Tags Listed? Y

Sample(s) Sealed? Y

Special Invoicing/Billing

Special Instructions *PLUS CHLOROBENZENE, TMB & TEMB. ANALYZE AN MS/MSD AND
DUPLICATE ON THIS CLIENT'S SAMPLES.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
3					
X04288A/B	24MP-10D	*BTEX	W	40V	2
X04289A/B	24MP-10S	*BTEX	W	40V	2
X04290A/B	MD24-6A	*BTEX	W	40V	2
X04291A/B	MD24-6	*BTEX	W	40V	2
X04292A/B	24MP-9D	*BTEX	W	40V	2
X04293A/B	24MP-9S	*BTEX	W	40V	2
X04297A/B	24MP-7D	*BTEX	W	40V	2
X04298A/B	24MP-7S	*BTEX	W	40V	2
X04299A/B	75MP-1S	*BTEX	W	40V	2
X04300A/B	75MP-1D	*BTEX	W	40V	2
X04294A/B	FIELD BLANK	*BTEX,TVH	W	40V	2
X04296A/B	TRIP BLANK	*BTEX,TVH	W	40V	2
X04288C/D	24MP-10D	TVH	W	40V	2
X04289C/D	24MP-10S	TVH	W	40V	2
X04290C/D	MD24-6A	TVH	W	40V	2
X04291C/D	MD24-6	TVH	W	40V	2
X04292C/D	24MP-9D	TVH	W	40V	2

R=Sample to be returned

Route GC/MS GC 3 Metals Wet Chem 2 SxPrep Acctg
To

SxRec C QA/QC C Sales C File Orig



CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Project #: 95-0861

Parsons Engineering Science, Inc. (PES) Project: MacDill AFB
(722450.21020)

Sample Receipt

On March 17, 1995, 12 water samples were received in good condition at Evergreen Analytical Laboratory. The chain of custody requested BTEX, TVH, anions and alkalinity analyses be performed on the trip and field blanks, however, due to lack of sample, only the BTEX and TVH analyses could be performed. Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

BTEX, Water Matrix, Method 602

Sample MD24-6A was analyzed at a 10x dilution due to the concentration of benzene in the sample. The reporting limit was increased accordingly. There were no quality control anomalies to report.

Total Volatile Hydrocarbon (TVH)

There were no quality control anomalies to report.

Sulfate, Chloride, Nitrite and Nitrate, Water Matrix, Method E300.0

There were no quality control anomalies to report.

Alkalinity, Water Matrix, Method E310.1

There were no quality control anomalies to report.

Patricia A. McClellan, Project Manager

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
1293C/D	24MP-9S	TVH	W	40V	2
X04297C/D	24MP-7D	TVH	W	40V	2
X04298C/D	24MP-7S	TVH	W	40V	2
X04299C/D	75MP-1S	TVH	W	40V	2
X04300C/D	75MP-1D	TVH	W	40V	2
X04288E	24MP-10D	ALKALINITY	W	250P	B6
X04289E	24MP-10S	ALKALINITY	W	250P	B6
X04290E	MD24-6A	ALKALINITY	W	250P	B6
X04291E	MD24-6	ALKALINITY	W	250P	B6
X04292E	24MP-9D	ALKALINITY	W	250P	B6
X04293E	24MP-9S	ALKALINITY	W	250P	B6
X04297E	24MP-7D	ALKALINITY	W	250P	B6
X04298E	24MP-7S	ALKALINITY	W	250P	B6
X04299E	75MP-1S	ALKALINITY	W	250P	B6
X04300E	75MP-1D	ALKALINITY	W	250P	B6
X04288F	24MP-10D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04289F	24MP-10S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04290F	MD24-6A	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04291F	MD24-6	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04292F	24MP-9D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04293F	24MP-9S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04297F	24MP-7D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04298F	24MP-7S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04299F	75MP-1S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6
X04300F	75MP-1D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	250P	B6

Page 2 of 2 Pages

Project # 95-0861

R=Sample to be returned

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

Page 1 of 2

CLIENT CONTACT (print) Todd WilliamsPROJECT I.D. Mac Dill AFBEAL QUOTE # 722450.210290TURNAROUND REQUIRED* 30 days
*expedited turnaround subject to additional feeFAX RESULTS Y

COMPANY PARSONS ENGINEERING SCIENCE
ADDRESS 1700 S. BROADWAY SUITE 900
CITY DENVER STATE CO ZIP 80290
PHONE# 303 831-8100 FAX# 303 831-8208

Sampler Name:

(signature) Jeff Fetkenhour(print) JEFF FETKENHOUREvergreen Analytical Cooler No. 383

Cooler Received

PRINTPlease
all information:CLIENT
SAMPLE
IDENTIFICATION

DATE

SAMPLED TIME

EAL Sample No.									
24MP-10D	3/15/95	1130	6	X					04288
24MP-10S	3/15/95	1153	6	X					87
MD 24-6A	3/15/95	1320	6	X					96
MD 24-6	3/15/95	1515	6	X					91
24MP-9D	3/15/95	1400	6	X					92
24MP-9S	3/15/95	1445	6	X					93
FIELD BLANK	3/15/95	1450	1	DI H ₂ O					94
MD 24-6 - JET									95 not used 94
TRIP BLANK			1						96
24MP-7D	3/16/95	0800	6	X					97
HT:									Location B-6
DD:									Container Size

Instructions:

All samples placed in ice

Please also get trip blank & field blank for BTEX, TPH, Alkalinity, Arsenic

All groundwater samples preliminary - Please

release ASAP.

Relinquished by

Date/Time Received by: (Signature)

Relinquished by: (Signature)

Date/Time

Relinquished by: (Signature)

Date/Time

Evergreen Analytical Sample Receipt/Check-in Record

Date & Time Rec'd: 3-17-95 1130 Shipped Via: H.D.
 (Airbill # if applicable)

Client : Parsons ES

Client Project ID(s): 722450202

EAL Project #(s): 95-0861 EAL Cooler(s): Y (H)

Cooler# client

Ice packs (Y) N Y N Y N Y N Y N

Temperature °C chilled

- | | Y | N | N/A |
|--|----------|----------|----------|
| 1. Custody seal(s) present: | | <u>X</u> | |
| Seals on cooler intact | | | |
| Seals on bottle intact | | | |
| 2. Chain of Custody present: | <u>X</u> | | |
| 3. Containers broken or leaking: | | <u>X</u> | |
| (Comment on COC if Y) | | | |
| 4. Containers labeled: | <u>X</u> | | |
| 5. COC agrees w/ bottles received: | <u>X</u> | | |
| (Comment on COC if N) | | | |
| 6. COC agrees w/ labels: | <u>X</u> | | |
| (Comment on COC if N) | | | |
| 7. Headspace in VOA vials-waters only | | | <u>X</u> |
| (comment on COC if Y) | | | |
| 8. VOA samples preserved: | | | <u>X</u> |
| 9. pH measured on metals, cyanide or phenolics*: | | | <u>X</u> |
| List discrepancies _____ | | | |
| *Non-EAL provided containers only, water samples only. | | | |
| 10. Metal samples present: | | | <u>X</u> |
| Total _____, Dissolved _____ | | | |
| D or PD to be filtered: | | | |
| T,TR,D,PD to be Preserved: | | | |
| 11. Short holding times: | | <u>X</u> | |
| Specify parameters _____ | | | |
| 12. Multi-phase sample(s) present: | | <u>X</u> | |
| 13. COC signed w/ date/time: | <u>X</u> | | |

Comments: _____

(Additional comments on back)

Custodian Signature/Date: [Signature] 3-17-95

Evergreen Analytical Inc.

COMPANY **PARSONS ENGINEERING SCIENCE**
 ADDRESS **1700 S BROADWAY SUITE 900**
 CITY **DENVER** STATE **CO** ZIP **80290**
 PHONE# **303 831-8100** FAX# **303 831-8208**

4036 Youngfield St.
 Wheat Ridge, Colorado 80033
 (303) 425-6021
 FAX (303) 425-6854
 (800) 845-7400

CLIENT CONTACT (print) **Todd Wiedemeier**
 PROJECT I.D. **Mac Dill AFB**
 EAL QUOTE # **722450.210280.0**
 TURNAROUND REQUIRED* **30 days**
 *expedited turnaround subject to additional fee

Sampler Name:

(signature) *Jeff Fetherman*
 (print) **JEFF FETHERMAN**

Evergreen Analytical Cooler No. **383**
 Cooler Received

PRINT
 Please provide all information:

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	ANALYSIS REQUESTED															EAL Sample No.		
			MATRIX			ANALYSIS REQUESTED														
			Water/Drinking/Discharge/Environment (circle)	Soil / Solid	Oil / Sludge	TCLP VOA/BNA/Pes/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 82 /625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TPPH 418 /1011 & Grease 413.1 (circle)	TPPH 8015mod. (Gasoline)	TPPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Alkalinity (circle & list metals below)	
24MP-10D	3/15/95	1130	X												X					X
24MP-10S	3/15/95	1153	X												X					X
MD 24-6A	3/15/95	1320	X												X					X
MD 24-6	3/15/95	1515	X												X					X
24MP-9D	3/15/95	1400	X												X					X
24MP-9S	3/15/95	1445	X												X					X
FIELD BLANK	3/15/95	1450													X					X
MD 24-6	3/15/95																			
TRIP BLANK																				
24MP-7D	3/16/95	0800	X												X					X
HT:																				
DO:																				

Instructions: All samples placed in ice
 Please analyze trip blank & field blank for BTEX, TVH, Alkalinity, Arsenic, Cyanide, Trip, Field Blank for all
 All groundwater samples preliminary - Please analyze ASAP.
 Relinquished by: (Signature) *Jeff Fetherman* Date/Time **3/16/95** Received by: (Signature) *David M. Smith* Date/Time **3-17-95**
 Relinquished by: (Signature) *Jeff Fetherman* Date/Time **13/10/95** Received by: (Signature) *David M. Smith* Date/Time **3-17-95**
 Relinquished by: (Signature) *Jeff Fetherman* Date/Time **1600** Received by: (Signature) *David M. Smith* Date/Time **3-17-95**

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-6	Client Project No.	: 722450.21020
Lab Sample Number	: X04291		MacDill
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/21/95	Matrix	: Water
		Lab File No.	: BX2032118
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	1.0 J	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 90%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

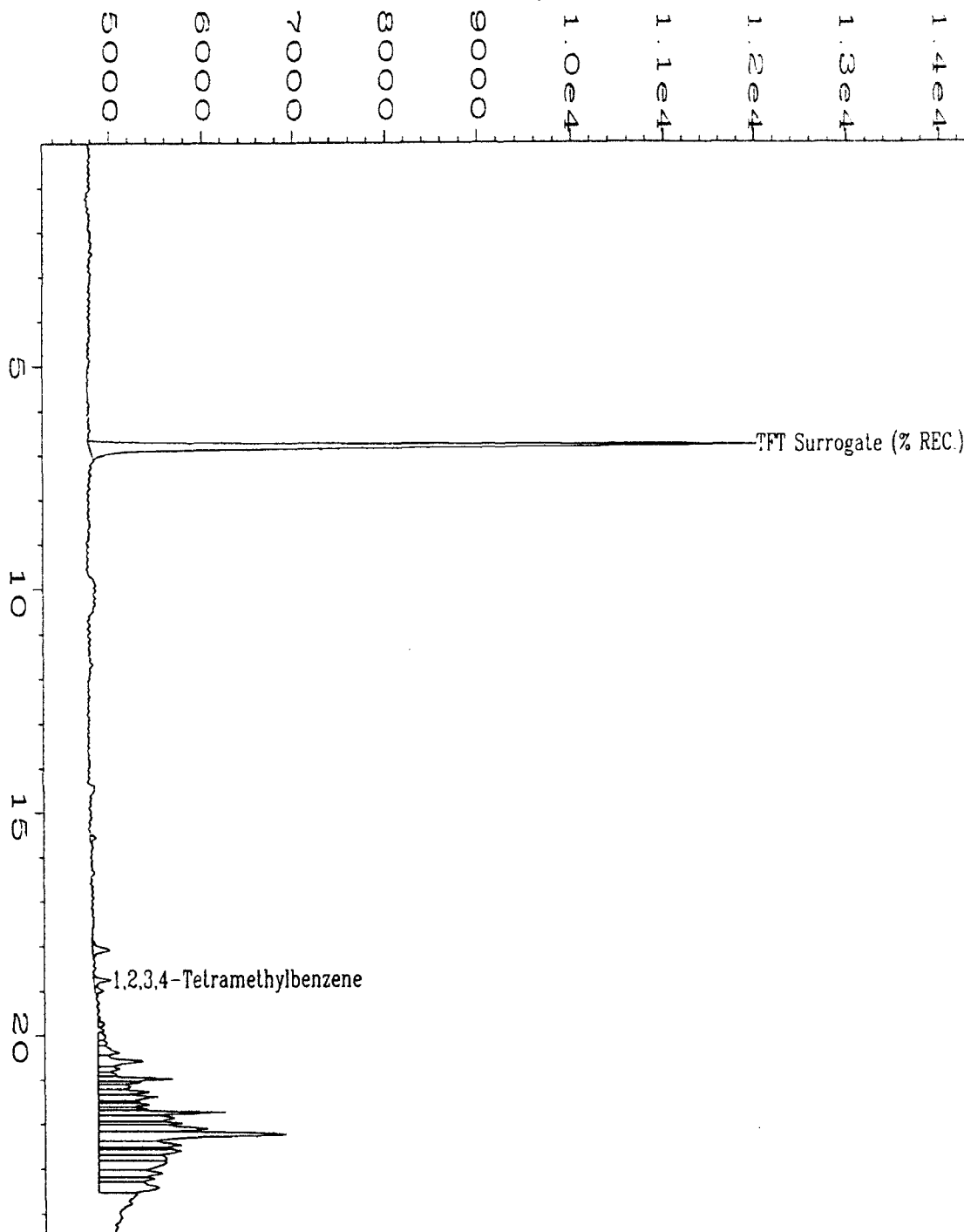
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

A. McClellan
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\018R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04291 DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20321.MT
Acquired on	: 21 Mar 95 10:59 PM	Analysis Method	: BX20321.MT
Report Created on	: 21 Mar 95 11:24 PM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-6 Water		

md24
on 3/24/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-6A	Client Project No.	: 722450.21020
Lab Sample Number	: X04290	MacDill	
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/21/95	Matrix	: Water
		Lab File No.	: BX2032117
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L		PQL ug/L
Benzene	71-43-2	**		**
Toluene	108-88-3	0.9	J	4.0
Ethyl Benzene	100-41-4	4.9		4.0
Total Xylene	1330-20-7	1.1	J	4.0
Chlorobenzene	108-90-7	U		4.0
1,3,5-trimethylbenzene	108-67-8	U		4.0
1,2,4-trimethylbenzene	95-63-6	U		4.0
1,2,3-trimethylbenzene	526-73-8	U		4.0
1,2,3,4-tetramethylbenzene	488-23-3	3.2	J	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

** = See BX2032212 for noted values, df = 10, 03/22/95.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 99%

QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

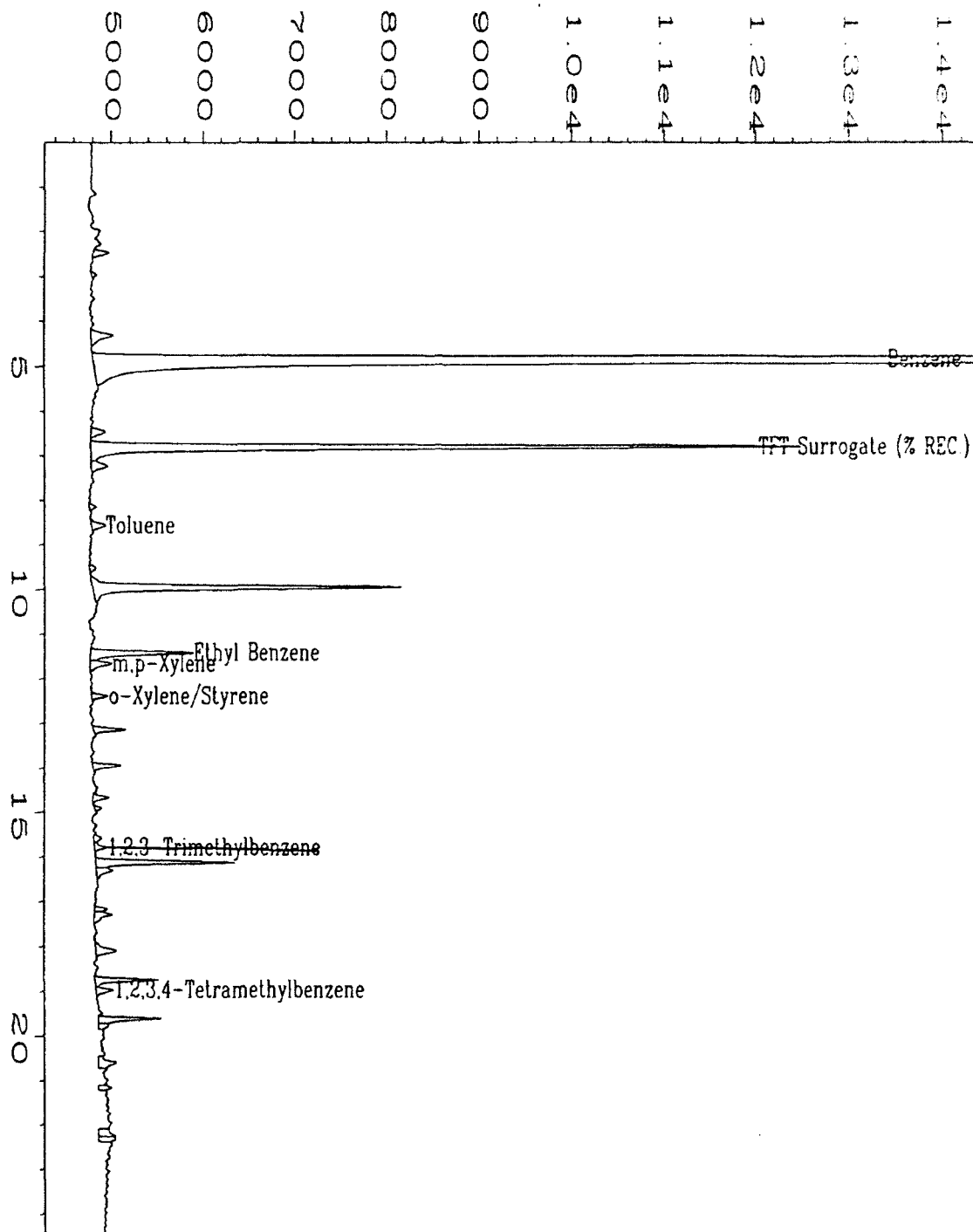
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

AmCille
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\017R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04290 DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX2032.MT
Acquired on	: 21 Mar 95 10:13 PM	Analysis Method	: BX20321.MT
Report Created on:	21 Mar 95 10:38 PM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-6A Water		

DM 4/13/95

MD24
DM 4/13/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-6A	Client Project No.	: 722450.21020
Lab Sample Number	: X04290		MacDill
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 10.00
Date Extracted/Prepared	: 3/22/95	Method	: 602
Date Analyzed	: 3/22/95	Matrix	: Water
		Lab File No.	: BX2032212
		Method Blank No.	: MB032295

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	170	40
Toluene	108-88-3	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylene	1330-20-7	**	**
Chlorobenzene	108-90-7	**	**
1,3,5-trimethylbenzene	108-67-8	**	**
1,2,4-trimethylbenzene	95-63-6	**	**
1,2,3-trimethylbenzene	526-73-8	**	**
1,2,3,4-tetramethylbenzene	488-23-3	**	**

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

** = See BX2032117 for noted values, df = 1, 03/21/95.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 87%

QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

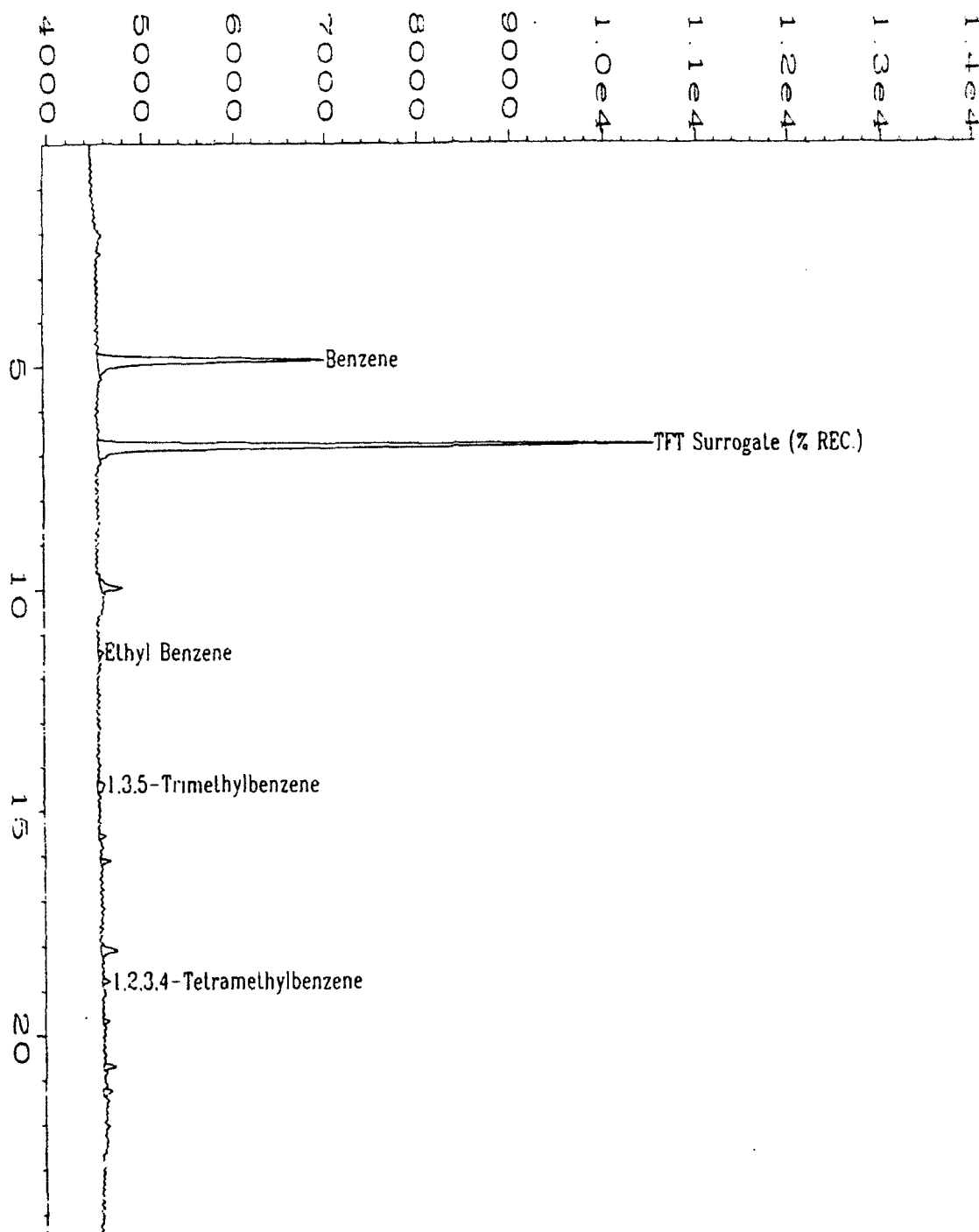
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

A. McClellan
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20322\012R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04290 DF=10	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX2032 MT
Acquired on	: 22 Mar 95 07:26 PM	Analysis Method	: BX2032 IT
Report Created on:	22 Mar 95 07:51 PM	Sample Amount	: 0
Last Recalib on	: 22 Mar 95 04:04 PM	ISTD Amount	:
Multiplier	: 10		
Sample Info	: Project#: 95-0861 Client#: MD24-6A Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-7S	Client Project No.	: 722450.21020
Lab Sample Number	: X04298	MacDill	
Date Sampled	: 3/16/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/22/95	Matrix	: Water
		Lab File No.	: BX2032126
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	3.1 J	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 93%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

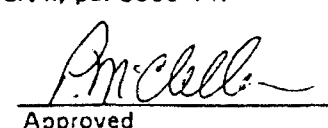
B = Compound found in blank and sample. Compare blank and sample data.

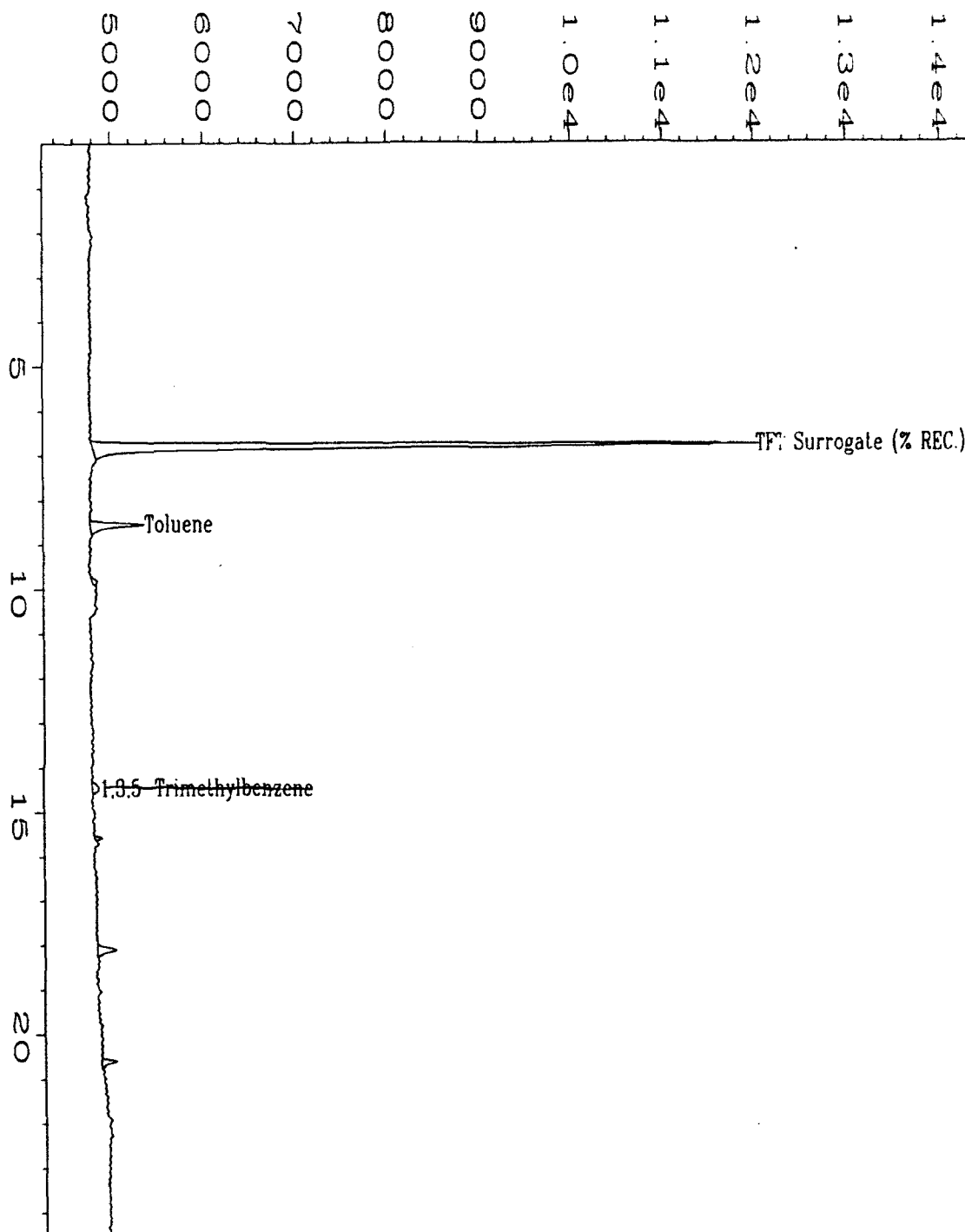
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name : C:\HPCHEM\2\DATA\BX20321\026R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04298 DF=1
 Run Time Bar Code:
 Acquired on : 22 Mar 95 05:10 AM
 Report Created on: 22 Mar 95 05:35 AM
 Last Recalib on : 21 Mar 95 03:32 PM
 Multiplier : 1
 Sample Info : Project#: 95-0861 Client#: 24MP-7S Water

Page Number : 1
 Vial Number : 26
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20321.MT
 Analysis Method : BX20321.MT
 Sample Amount : 0
 ISTD Amount :

Don 4/15/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-7D	Client Project No.	: 722450.21020
Lab Sample Number	: X04297	MacDill	
Date Sampled	: 3/16/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/22/95	Matrix	: Water
		Lab File No.	: BX2032125
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 86%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

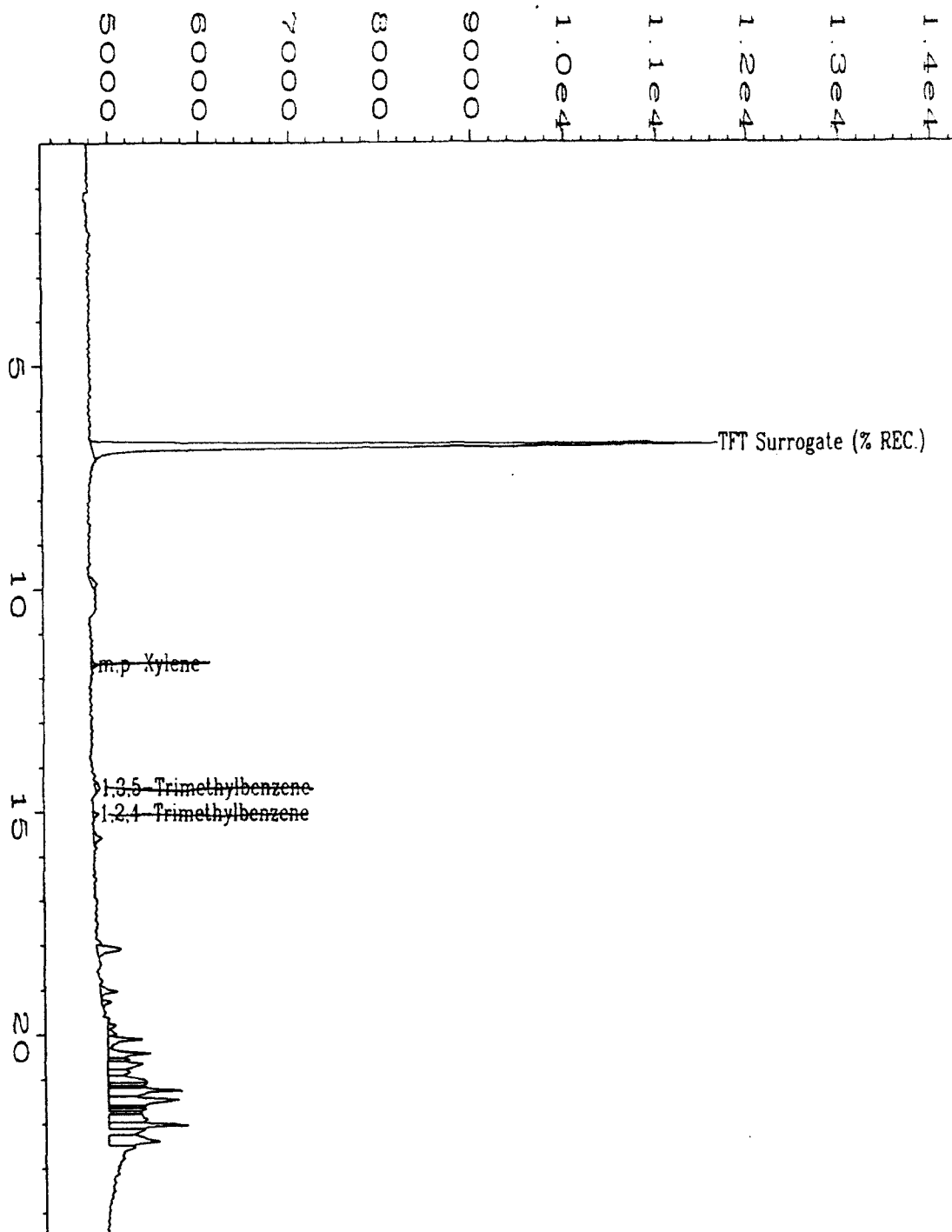
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\025R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 25
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04297 DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX2032. F
Acquired on	: 22 Mar 95 04:24 AM	Analysis Method	: BX20321.MT
Report Created on	: 22 Mar 95 04:49 AM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-7D	Water	

DM 4/13/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-9S/	Client Project No.	: 722450.21020
Lab Sample Number	: X04293		MacDill
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/22/95	Matrix	: Water
		Lab File No.	: BX2032124
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	3.0 J	4.0
Toluene	108-88-3	4.5	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	0.4 J	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	16	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 91%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

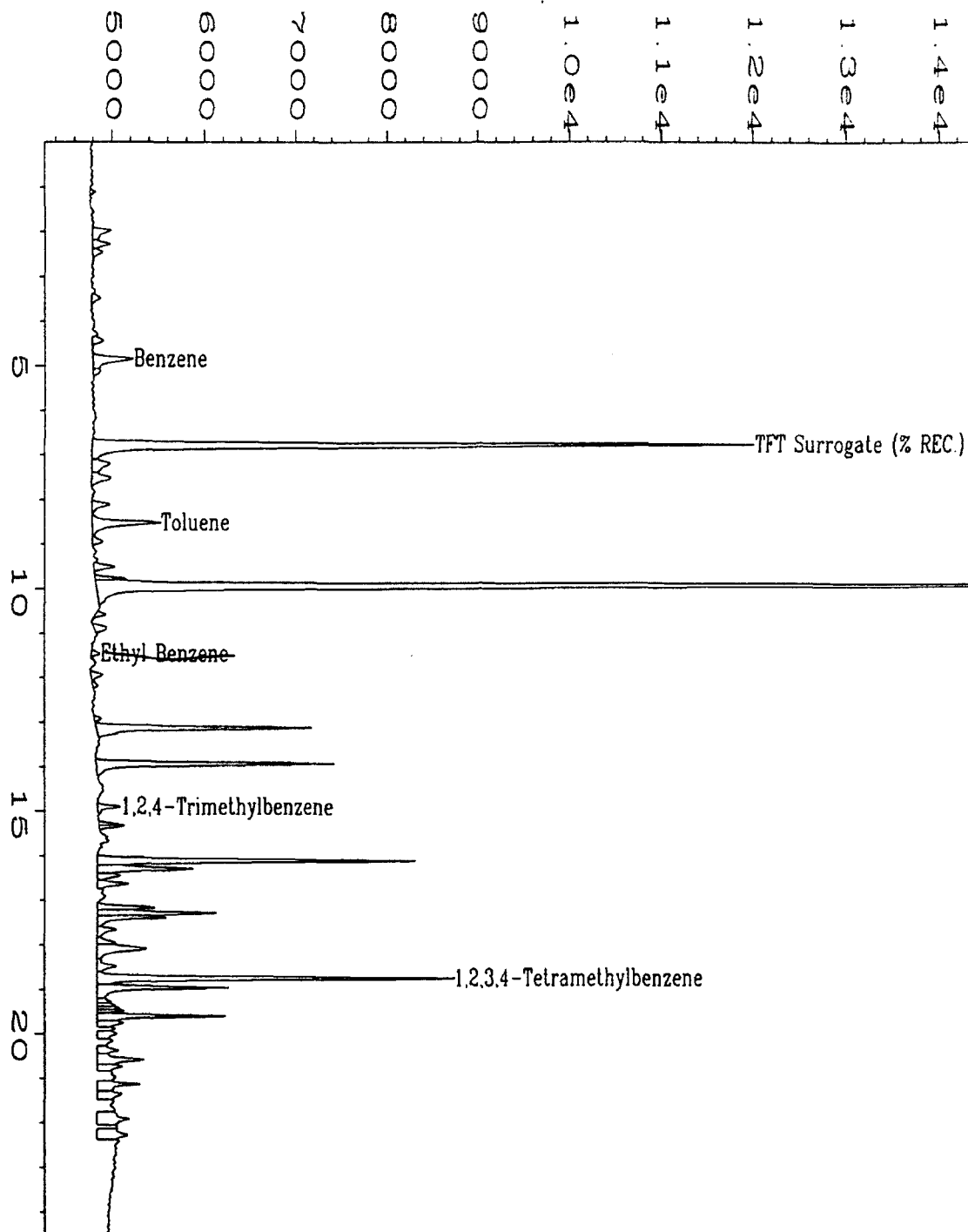
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

Am'Chelle
Approved



Data File Name : C:\HPCHEM\2\DATA\BX20321\024R0901.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX2 Vial Number : 24
 Sample Name : X04293 DF=1 Injection Number : 1
 Run Time Bar Code: Sequence Line : 9
 Acquired on : 22 Mar 95 03:37 AM Instrument Method: BX20321.M
 Report Created on: 22 Mar 95 04:02 AM Analysis Method : BX20321.M
 Last Recalib on : 21 Mar 95 03:32 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :
 Sample Info : Project#: 95-0861 Client#: 24MP-9S Water

pm 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-9D/	Client Project No.	: 722450.21020
Lab Sample Number	: X04292		MacDill
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/22/95	Matrix	: Water
		Lab File No.	: BX2032122
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 92%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

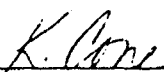
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

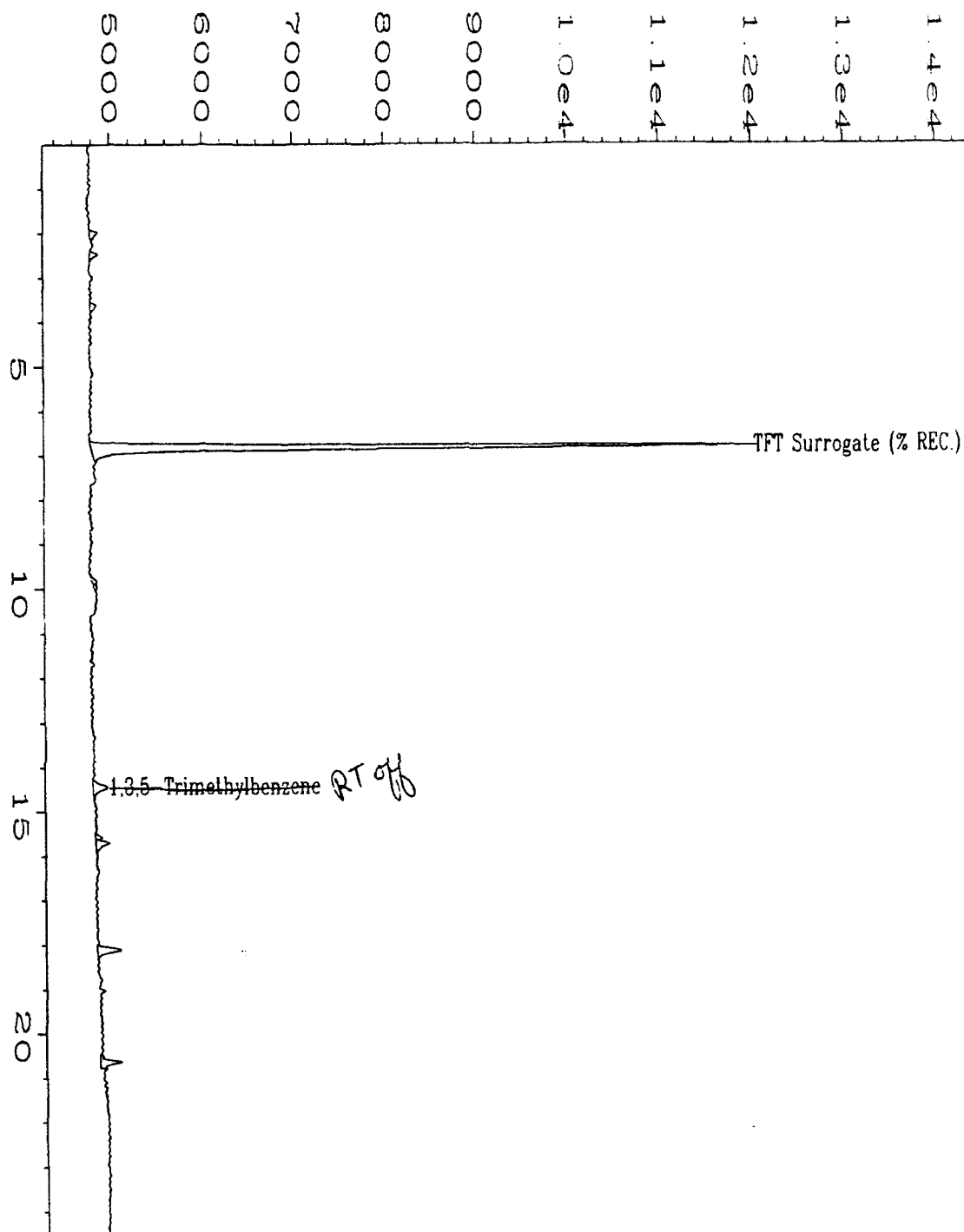
NA = Not available.



Analyst



Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\022R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 22
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04292 DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	: BX20321.MT
Acquired on	: 22 Mar 95 02:03 AM	Analysis Method	: BX20321.MT
Report Created on:	: 22 Mar 95 02:28 AM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-9D	Water	

run 4/3/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-9D	Client Project No.	: 722450.21020
Lab Sample Number	: X04292DUP ^J		MacDill
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/22/95	Matrix	: Water
		Lab File No.	: BX2032123
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 89%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

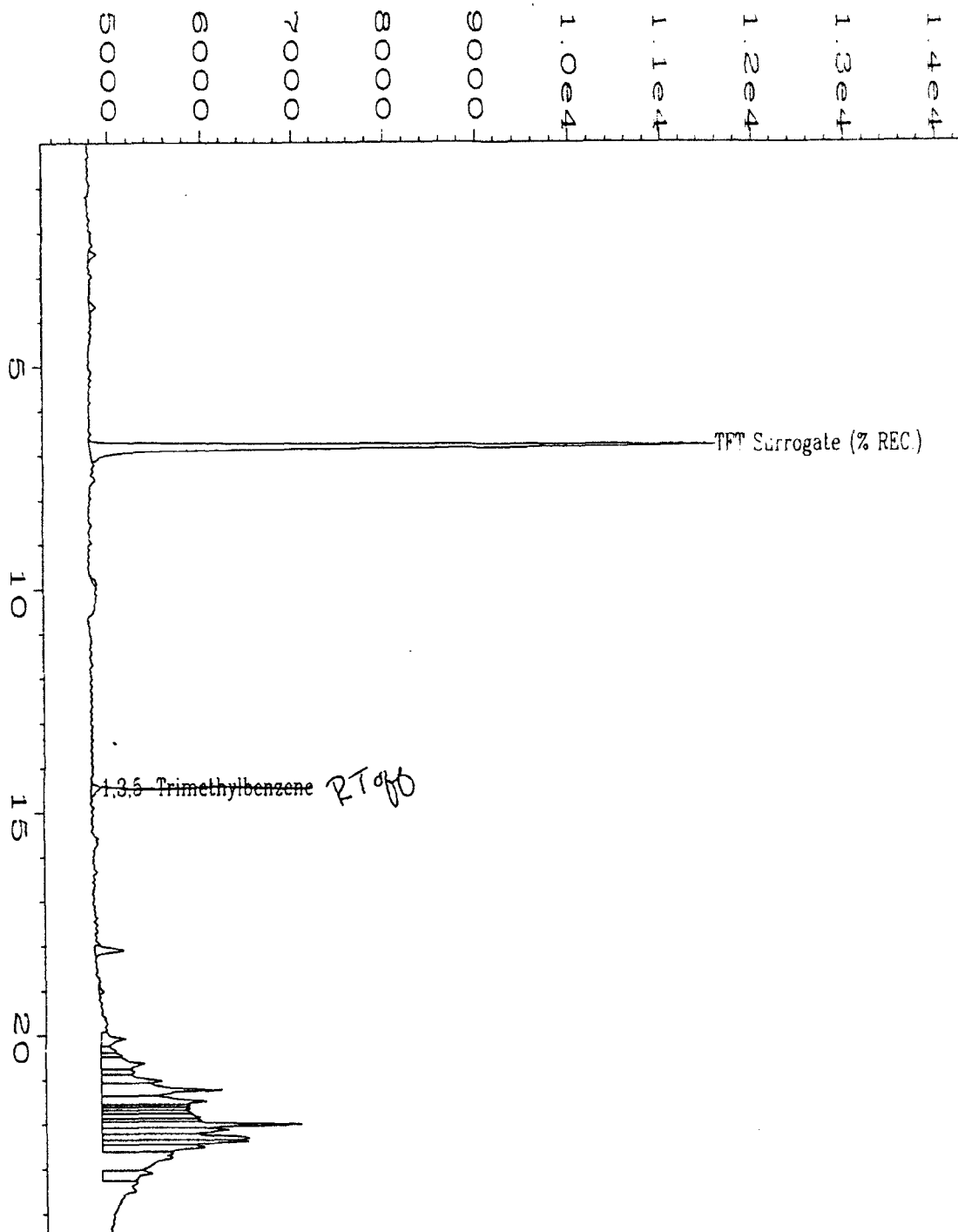
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

AmChelle
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\023R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 23
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04292DUP DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX2032.MT
Acquired on	: 22 Mar 95 02:51 AM	Analysis Method	: BX20321.MT
Report Created on:	: 22 Mar 95 03:16 AM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-9D Water		

on 4/3/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-10S	Client Project No.	: 722450.21020
Lab Sample Number	: X04289		MacDill
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/21/95	Matrix	: Water
		Lab File No.	: BX2032116
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	22	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 90%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

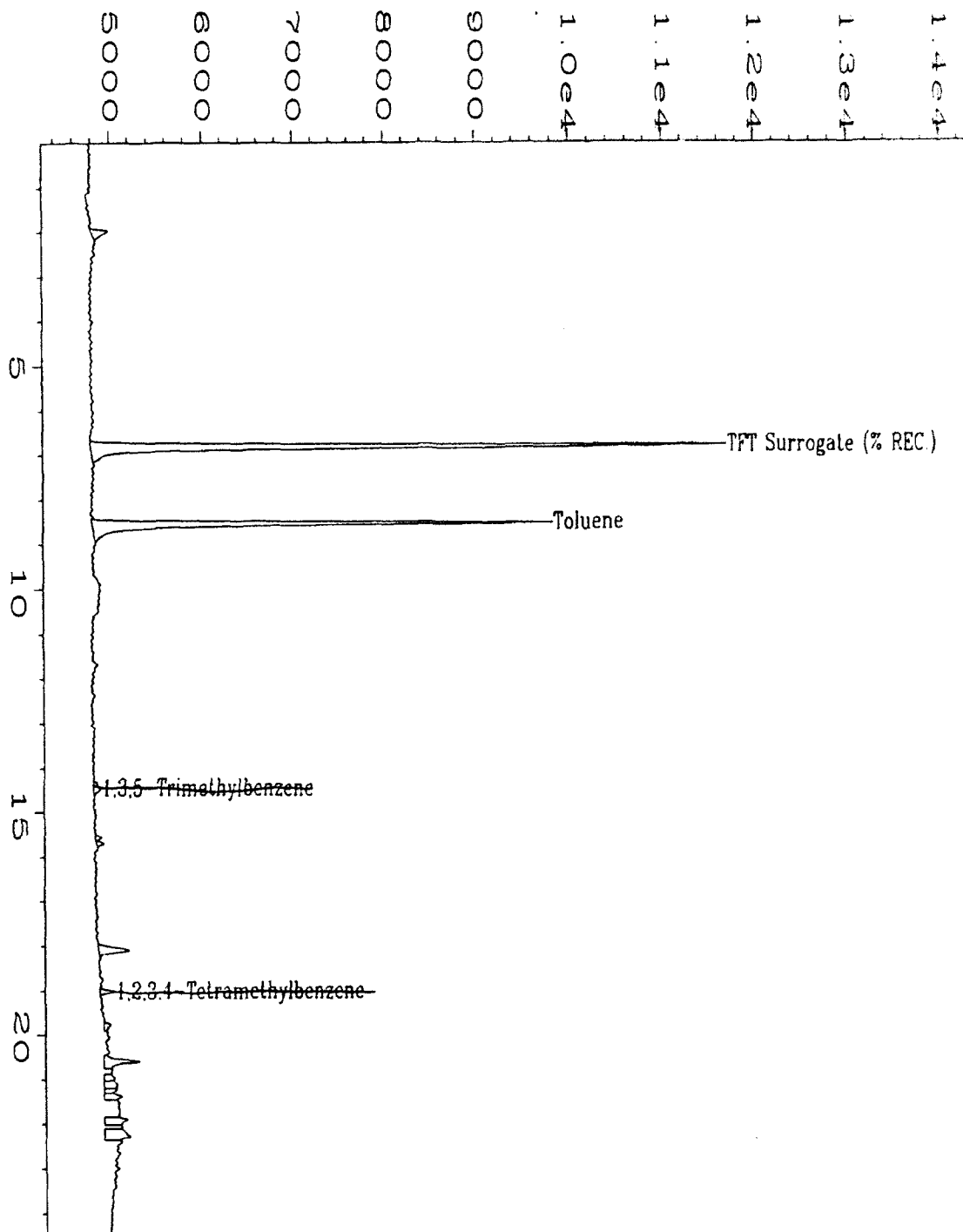
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K Cone
Analyst

Amelia
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\016R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04289 DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX2031 1T
Acquired on	: 21 Mar 95 09:27 PM	Analysis Method	: BX20321.MT
Report Created on:	21 Mar 95 09:52 PM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0851 Client#: 24MP-10S	Water	

per 4/18/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-10D	Client Project No.	: 722450.21020
Lab Sample Number	: X04288	MacDill	
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/21/95	Matrix	: Water
		Lab File No.	: BX2032114
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 97%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

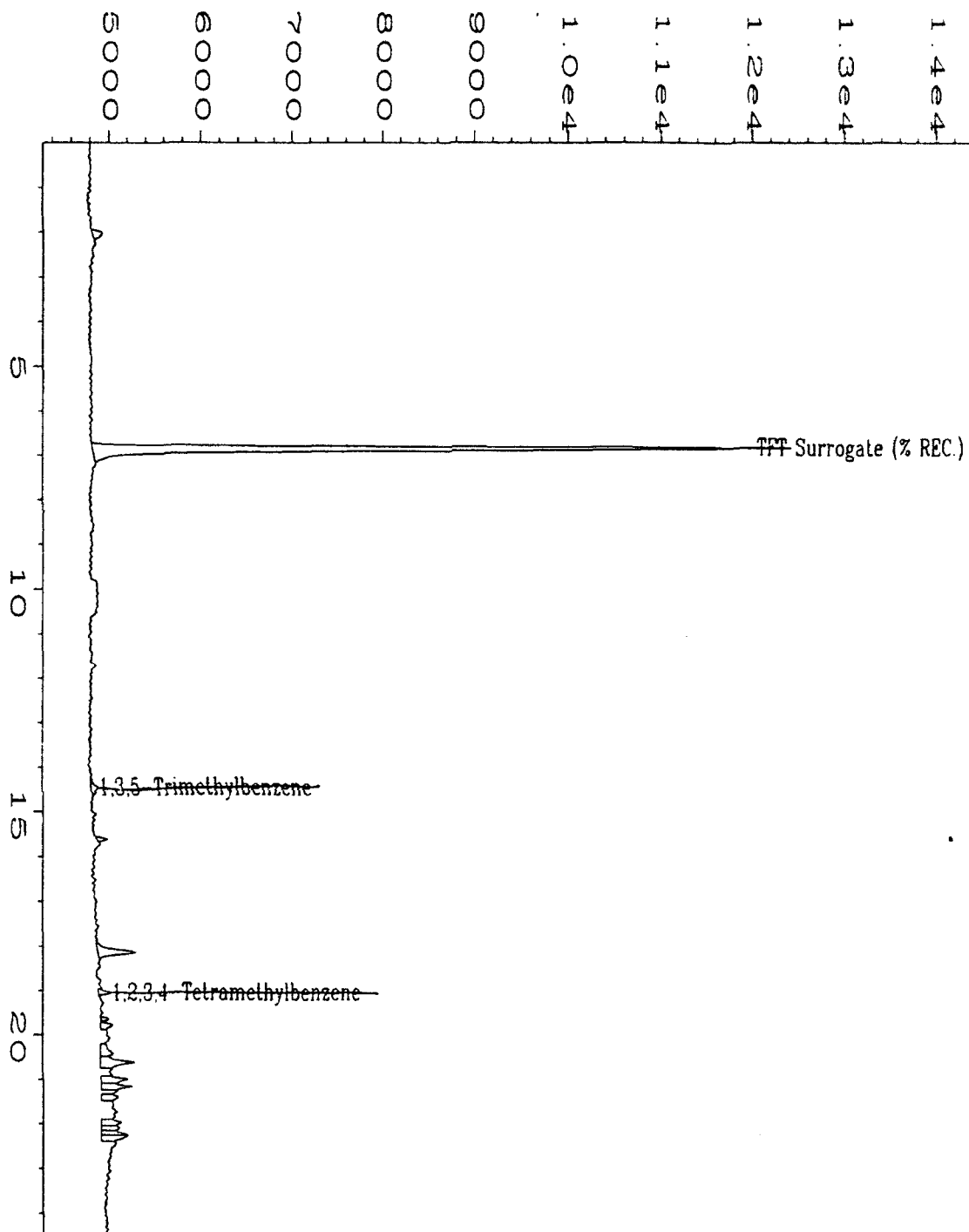
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

AmcClella
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\014R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04288 DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20321
Acquired on	: 21 Mar 95 07:54 PM	Analysis Method	: BX20321.MTH
Report Created on:	21 Mar 95 08:19 PM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-10D	Water	

pm 4/13/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-10D	Client Project No.	: 722450.21020
Lab Sample Number	: X04288DUP		MacDill
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/21/95	Matrix	: Water
		Lab File No.	: BX2032115
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 94%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

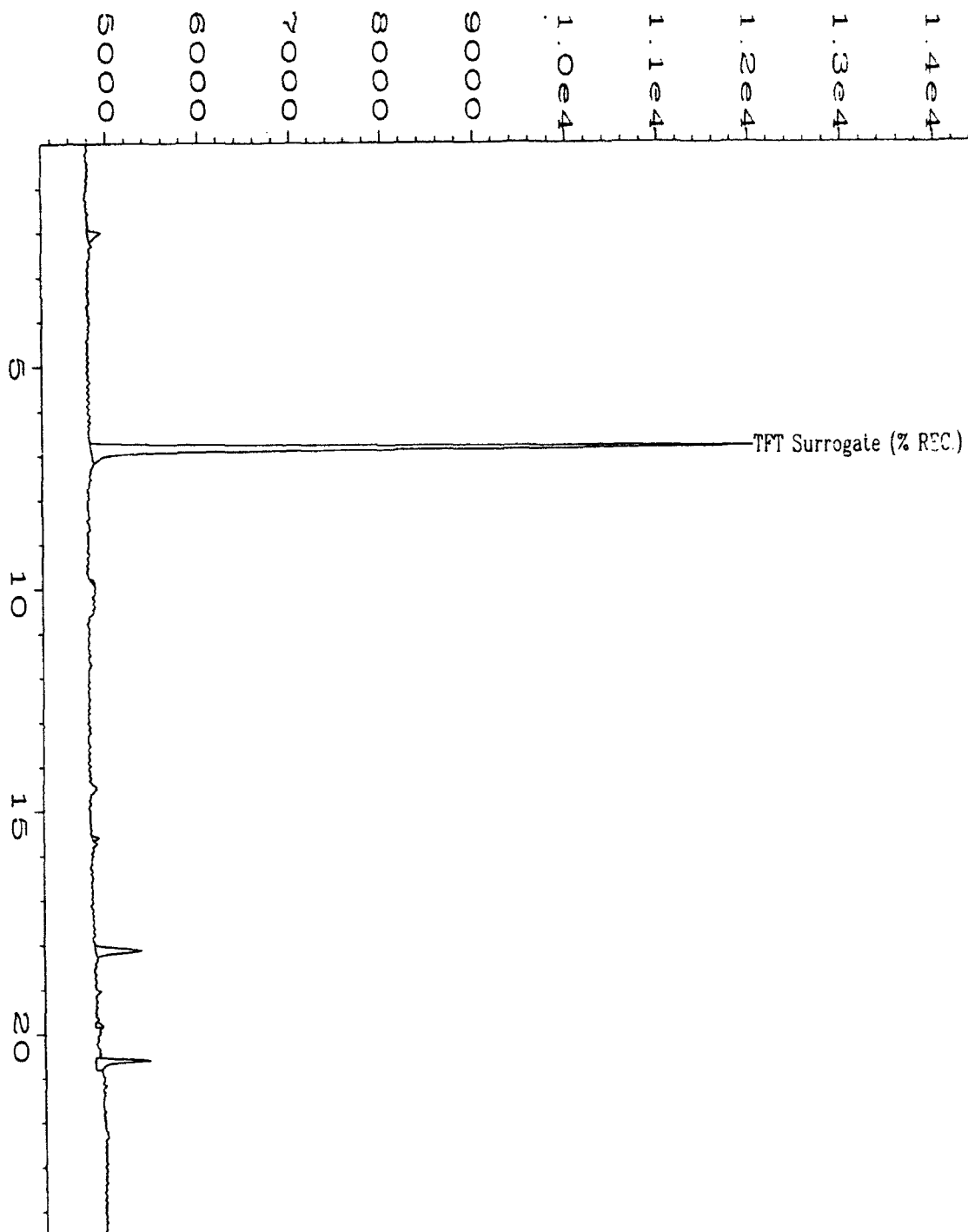
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K Cone
Analyst

Am. Chelli
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\015R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04288DUP DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	TX2032
Acquired on	: 21 Mar 95 08:41 PM	Analysis Method	: BX20321.MTi
Report Created on:	21 Mar 95 09:06 PM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-10D	Water	

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24MP-10D	Client Project No.	: 722450.21020 MACDI
Lab Sample No.	: X04288	Lab Project No.	: 95-0861
Date Sampled	: 3/15/95	EPA Method No.	: 5030/8015 Mod
Date Received	: 3/17/95	Matrix	: Water
Date Prepared	: 3/20/95	Method Blank	: MB032095
Date Analyzed	: 3/20/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	5.00	0.00	5.18	104	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	5.00	5.64	113	8.5	50	60-140

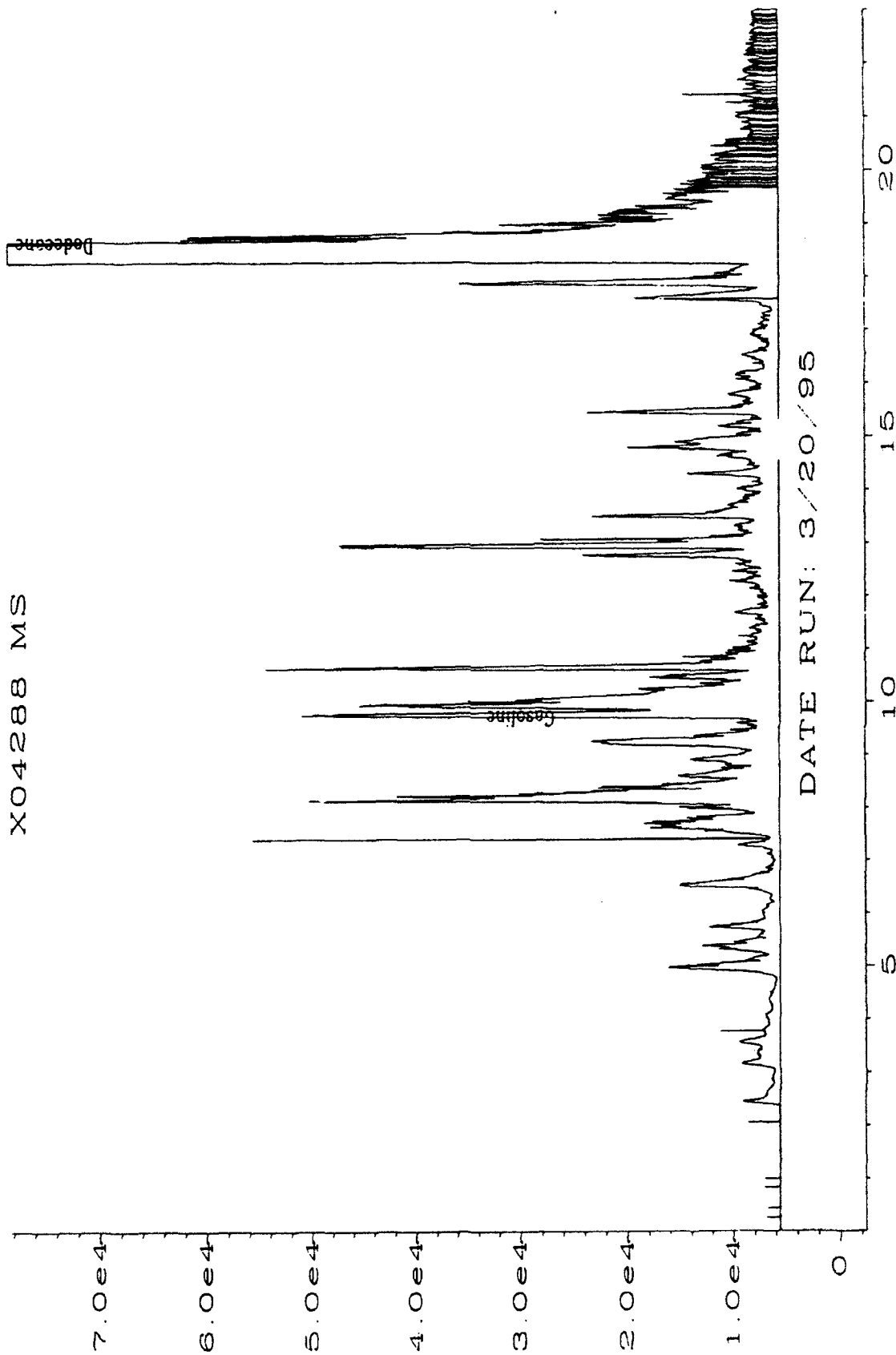
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

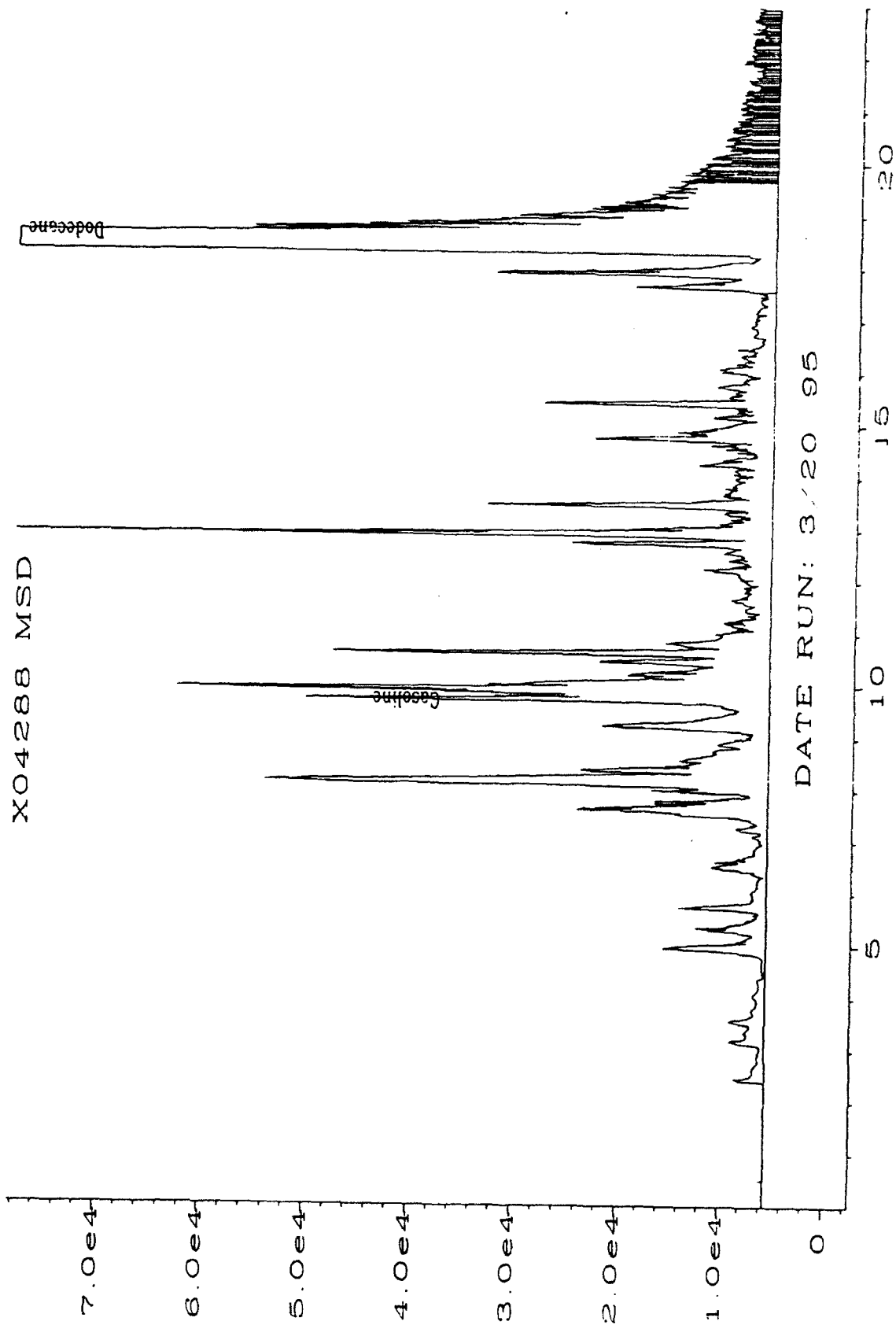
Spike Recovery: 0 out of (2) outside limits.

Comments: NA = Not analyzed/not applicable.

X04288 MS



Sig. 1 in C:\NHPCHEM\INDA\ANTVH0320\011F0101.D



Sig. 1 in C:\HPCHEM\1\DATA\TVH0320\012F0101.D

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Water Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MD24-6	Client Project No.	: 722450.21020
Lab Sample No.	: X04291	MacDill	
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	EPA Method No.	: 602
Date Prepared	: 3/21/95	Matrix	: Water
Date Analyzed	: 3/21/95	Lab File Number(s)	: BX2032119,20
		Method Blank	: MB032195

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20	0.0	17.1	85.5	65-121
Toluene	20	0.0	17.1	85.5	69-117
Ethyl Benzene	20	0.0	17.5	87.5	68-118
m/p-Xylene	40	0.0	35.1	87.8	66-116
o-Xylene	20	0.0	17.1	85.5	73-117
Chlorobenzene	20	0.0	17.1	85.5	65-121
1,3,5-TMB	20	0.0	16.4	82.0	65-121
1,2,4-TMB	20	0.0	16.5	82.5	65-121
1,2,3-TMB	20	0.0	17.0	85.0	65-121
1,2,3,4-TeMB	20	1.0	18.2	86.0	65-121

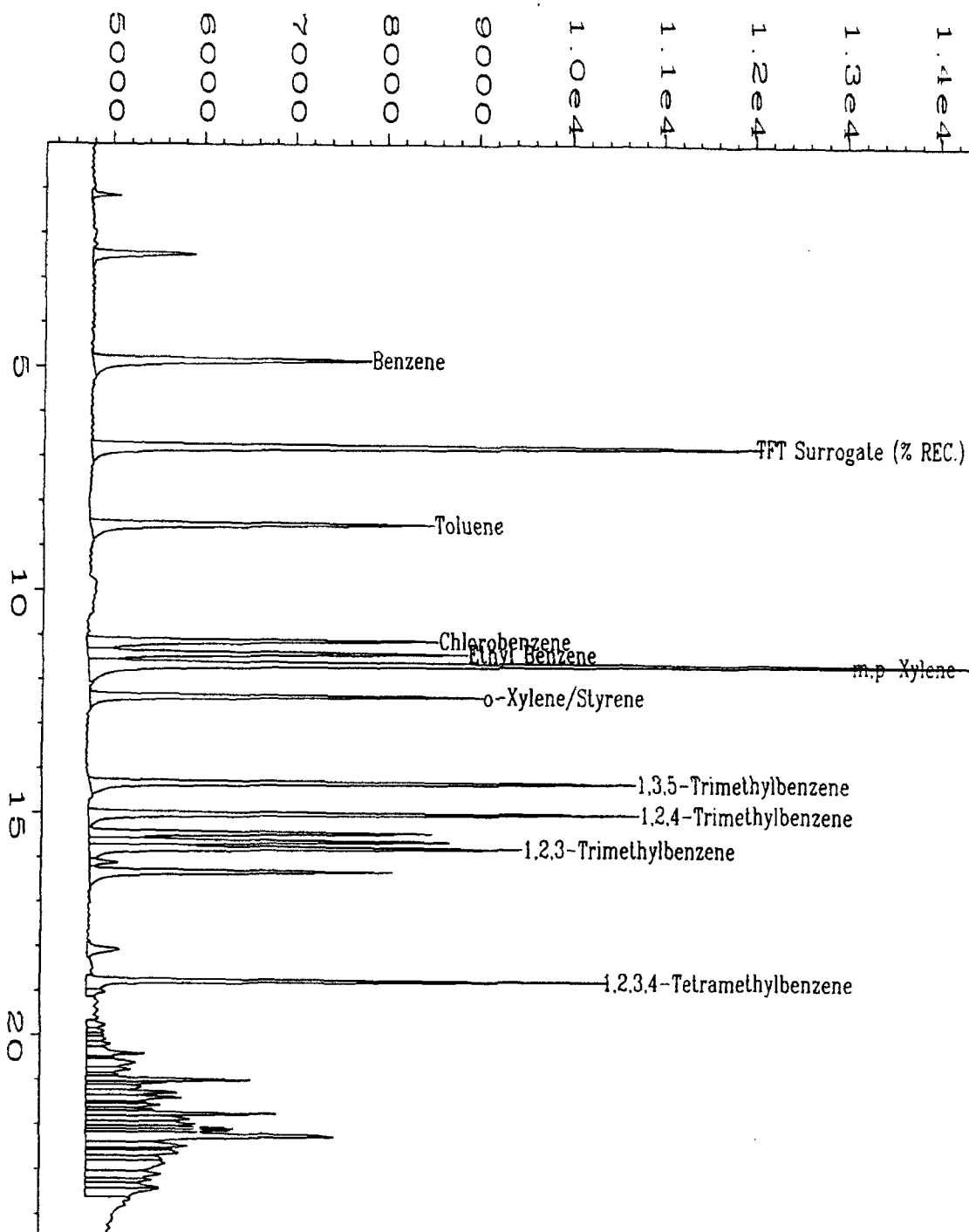
Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20	16.6	83.0	3.0	17.4	65-121
Toluene	20	17.3	86.5	1.2	15.8	69-117
Ethyl Benzene	20	17.1	85.5	2.3	11.9	68-118
m/p-Xylene	40	34.4	86.0	2.0	15.4	66-116
o-Xylene	20	16.9	84.5	1.2	13.2	73-117
Chlorobenzene	20	16.9	84.5	1.2	17.4	65-121
1,3,5-TMB	20	16.8	84.0	2.4	17.4	65-121
1,2,4-TMB	20	16.7	83.5	1.2	17.4	65-121
1,2,3-TMB	20	16.2	81.0	4.8	17.4	65-121
1,2,3,4-TeMB	20	16.1	75.5	13.0	17.4	65-121

* = Values outside of QC limits.

RPD: 0 out of (10) outside limits.

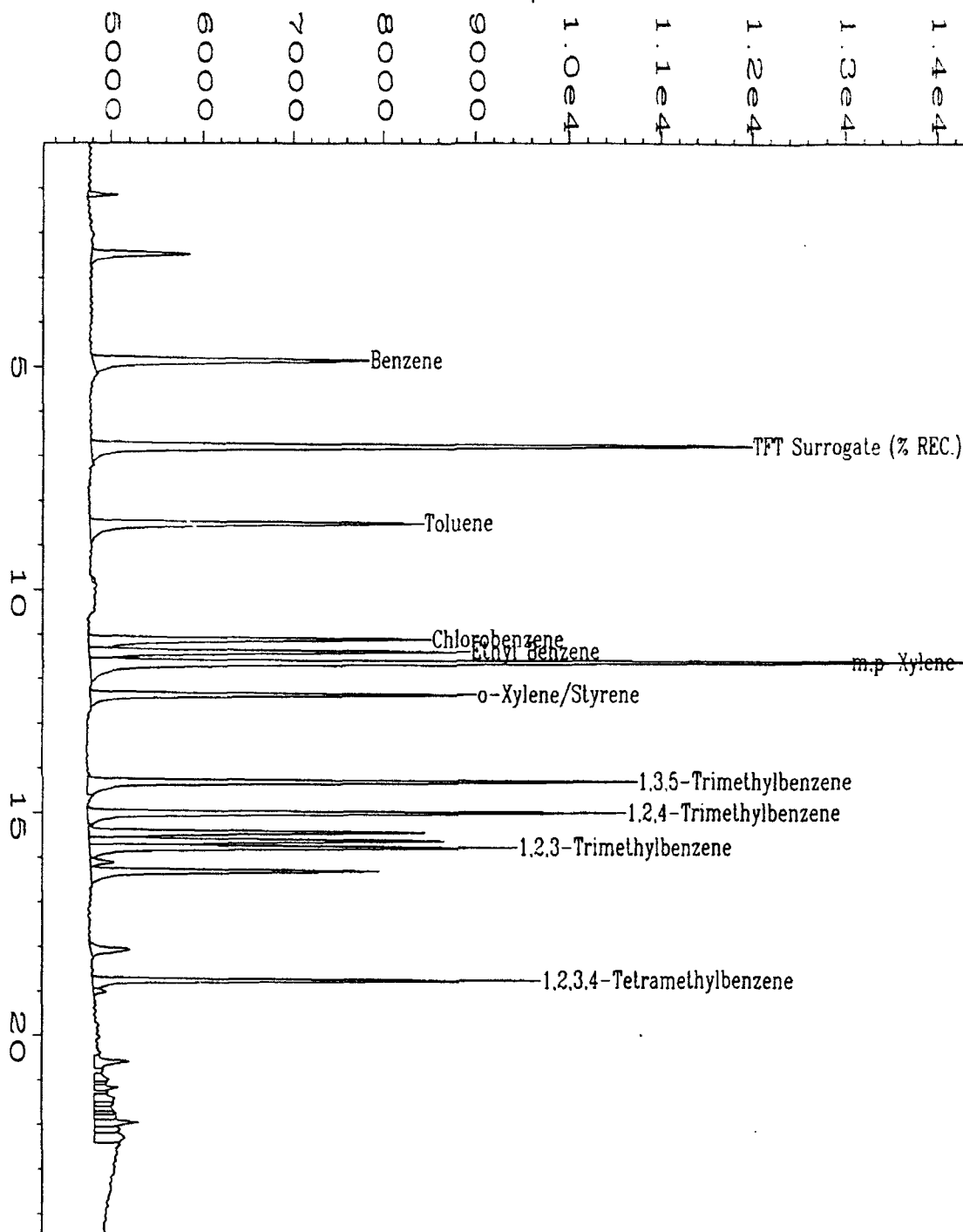
Spike Recovery: 0 out of (20) outside limits.

Comments: CJC
prc



Data File Name	: C:\HPCHEM\2\DATA\BX20321\019R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 19
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04291MS DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20321.MTH
quired on	: 21 Mar 95 11:44 PM	Analysis Method	: BX20321.MTH
Report Created on:	: 22 Mar 95 00:09 AM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-6 Water		

MDJ



Data File Name	: C:\HPCHEM\2\DATA\BX20321\020R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04291MSD DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20321.MTH
Acquired on	: 22 Mar 95 00:31 AM	Analysis Method	: BX20321.MTH
Report Created on:	22 Mar 95 00:56 AM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: 24MP-6 Water		

MD24

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Field Blank ^J	Client Project No.	: 722450.21020
Lab Sample Number	: X04294	MacDill	
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/22/95	Matrix	: Water
		Lab File No.	: BX2032129
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 81%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

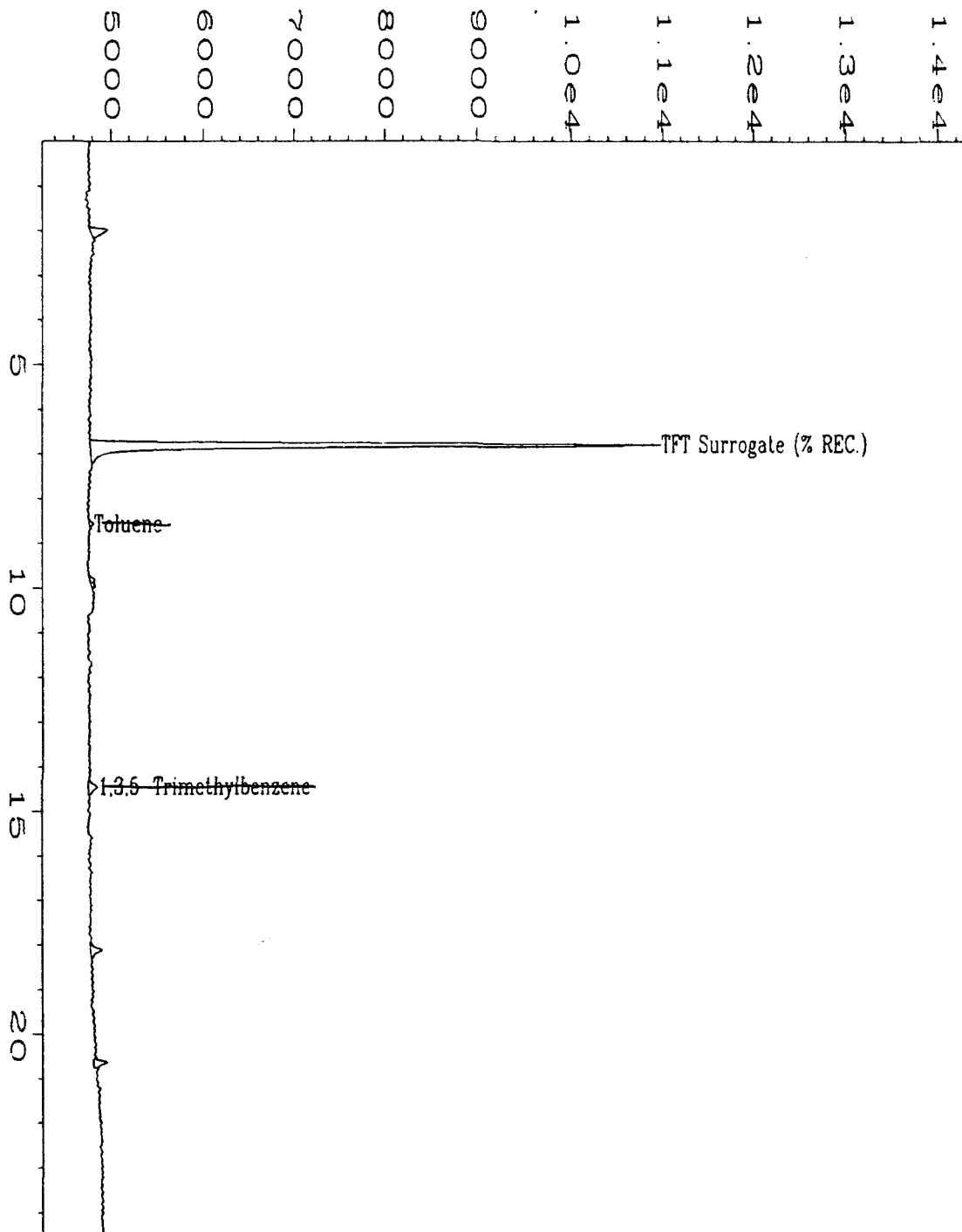
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Con
Analyst

AmcDill
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\029R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 29
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04294 DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX2032.1
Acquired on	: 22 Mar 95 07:31 AM	Analysis Method	: BX20321.MT
Report Created on:	22 Mar 95 07:56 AM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1	Sample Info	: Project#: 95-0861 Client#: Field Blank Water

pm 4/13/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.21020
Lab Sample Number	: X04296	MacDill	
Date Sampled	: 3/15/95	Lab Project No.	: 95-0861
Date Received	: 3/17/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/21/95	Method	: 602
Date Analyzed	: 3/22/95	Matrix	: Water
		Lab File No.	: BX2032130
		Method Blank No.	: MB032195

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 78%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

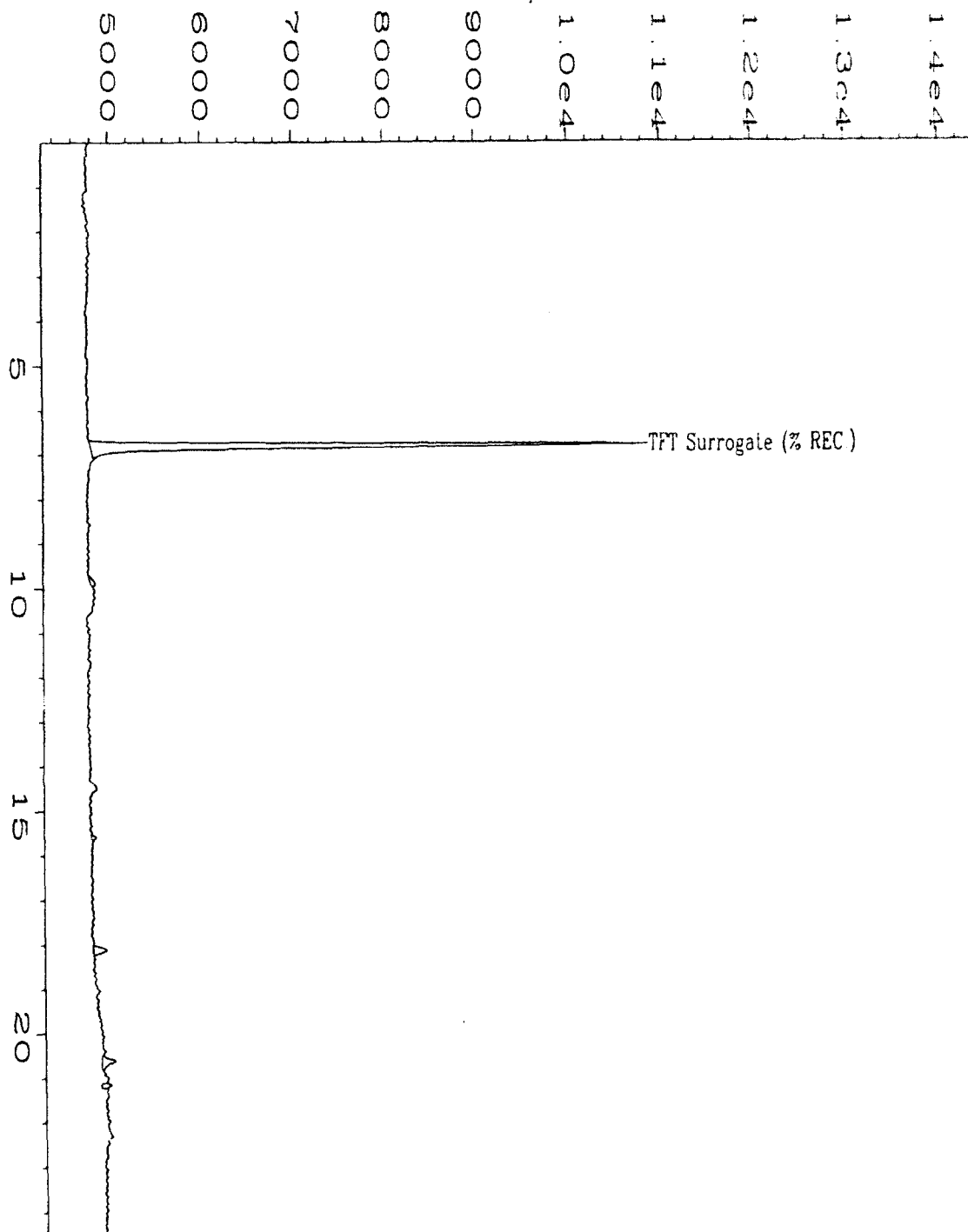
NA = Not available.

K. Cone

Analyst

AmcDill

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\030R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 30
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04296 DF=1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20321...TF
Acquired on	: 22 Mar 95 08:16 AM	Analysis Method	: BX20321.MTF
Report Created on:	22 Mar 95 08:41 AM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0861 Client#: Trip Blank Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB032195	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/21/95	MacDill	
Date Analyzed	: 3/21/95	Lab Project No.	: 95-0861
		Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2032111

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak

Surrogate Recovery:

α,α,α -Trifluorotoluene : 102%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

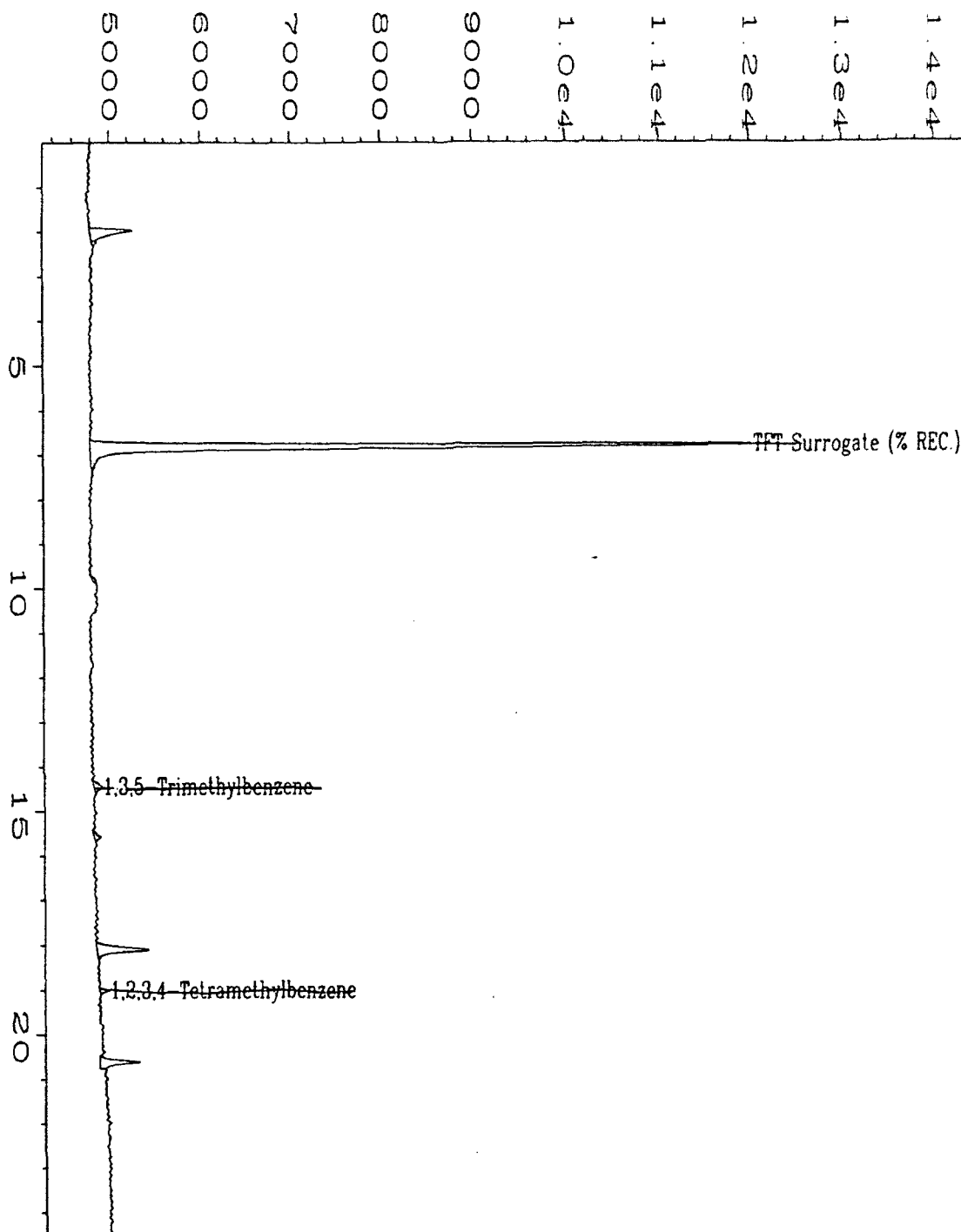
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

A. McCall
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\011R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB032195-WATER	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20321.MTH
Acquired on	: 21 Mar 95 05:32 PM	Analysis Method	: BX20321.MTH
Report Created on	: 21 Mar 95 05:57 PM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/13/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MBO32295	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/22/95	MacDill	
Date Analyzed	: 3/22/95	Lab Project No.	: 95-0861
		Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2032210

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak

Surrogate Recovery:

α,α,α -Trifluorotoluene : 81%
QC Reporting Limits : 70%-130%

QUALIFIERS:

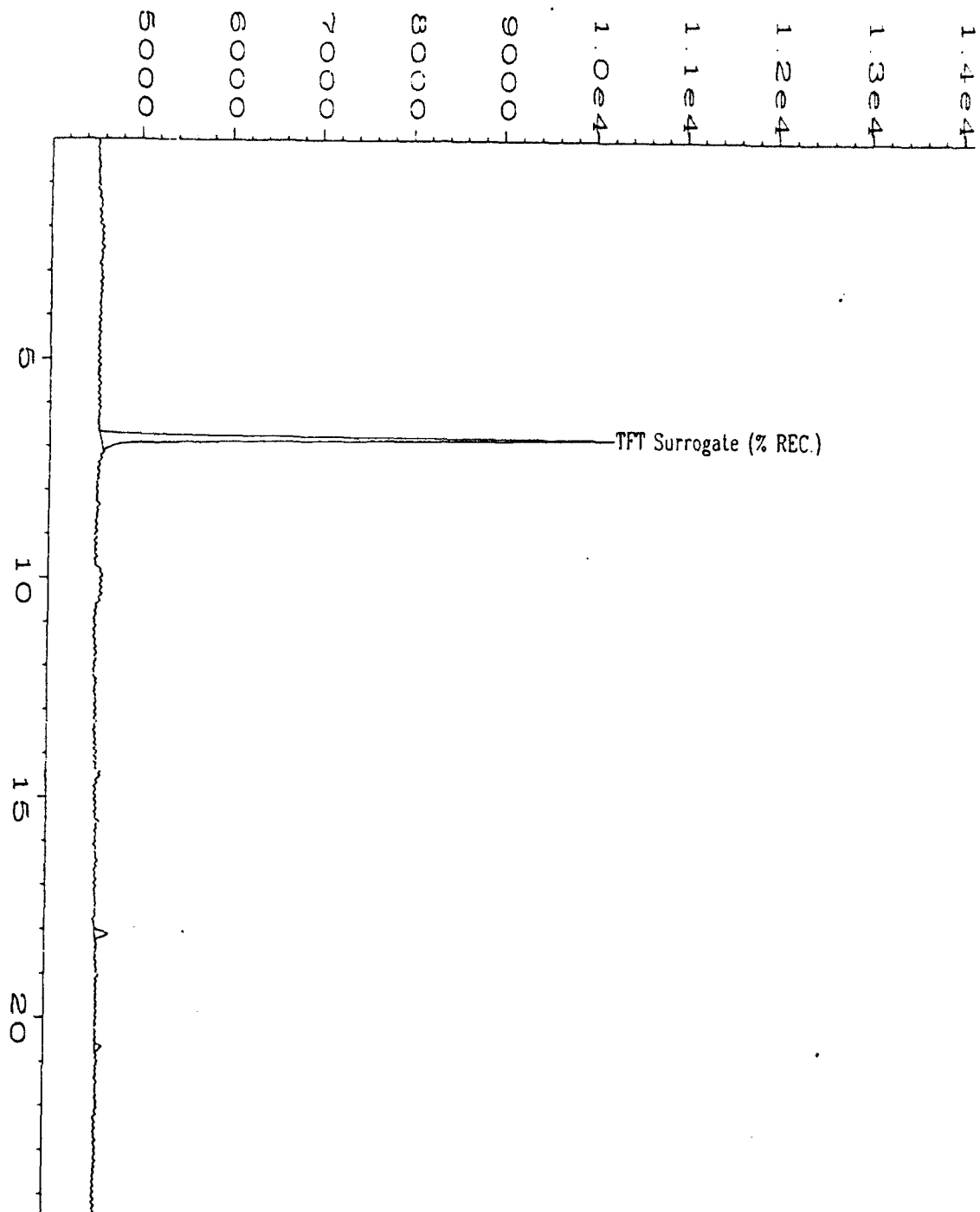
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

Amelle
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20322\010R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB032295-WATER	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX20321.MH
Acquired on	: 22 Mar 95 05:57 PM	Analysis Method	: BX20322.MTH
Report Created on:	22 Mar 95 06:22 PM	Sample Amount	: 0
Last Recalib on	: 22 Mar 95 04:04 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS032195	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/21/95	MacDill	
Date Analyzed	: 3/21/95	Lab Project No.	: 95-0861
		Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2032112

Compound Name	Cas Number	LCS	QC Limit
		Concentration ug/L	
Benzene	71-43-2	37	23-44
Toluene	108-88-3	36	26-43
Ethyl Benzene	100-41-4	36	26-48
m,p-Xylene	NA	37	25-47
o-Xylene	95-47-6	35	26-48
Chlorobenzene	108-90-7	36	28-46
1,3,5-trimethylbenzene	108-67-8	37	24-47
1,2,4-trimethylbenzene	95-63-6	30	23-46
1,2,3-trimethylbenzene	526-73-8	35	29-49
1,2,3,4-tetramethylbenzene	488-23-3	34	NA

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

α,α,α -Trifluorotoluene : 101%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

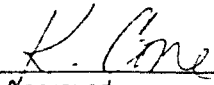
B = Compound found in blank and sample. Compare blank and sample data.

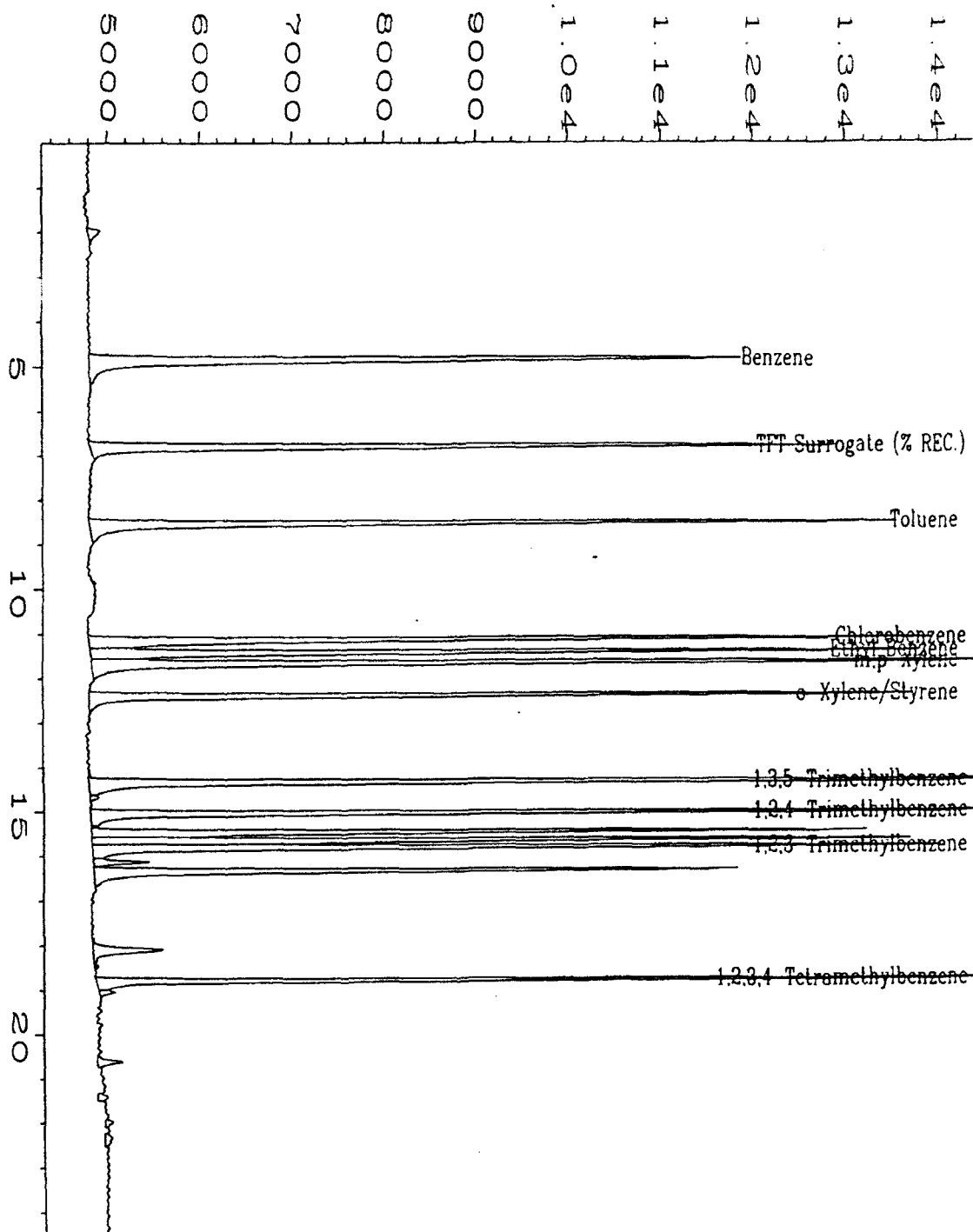
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20321\012R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS032195	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20321.MTH
Acquired on	: 21 Mar 95 06:19 PM	Analysis Method	: BX20321.MTH
Report Created on	: 21 Mar 95 06:44 PM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		

External Standard Report

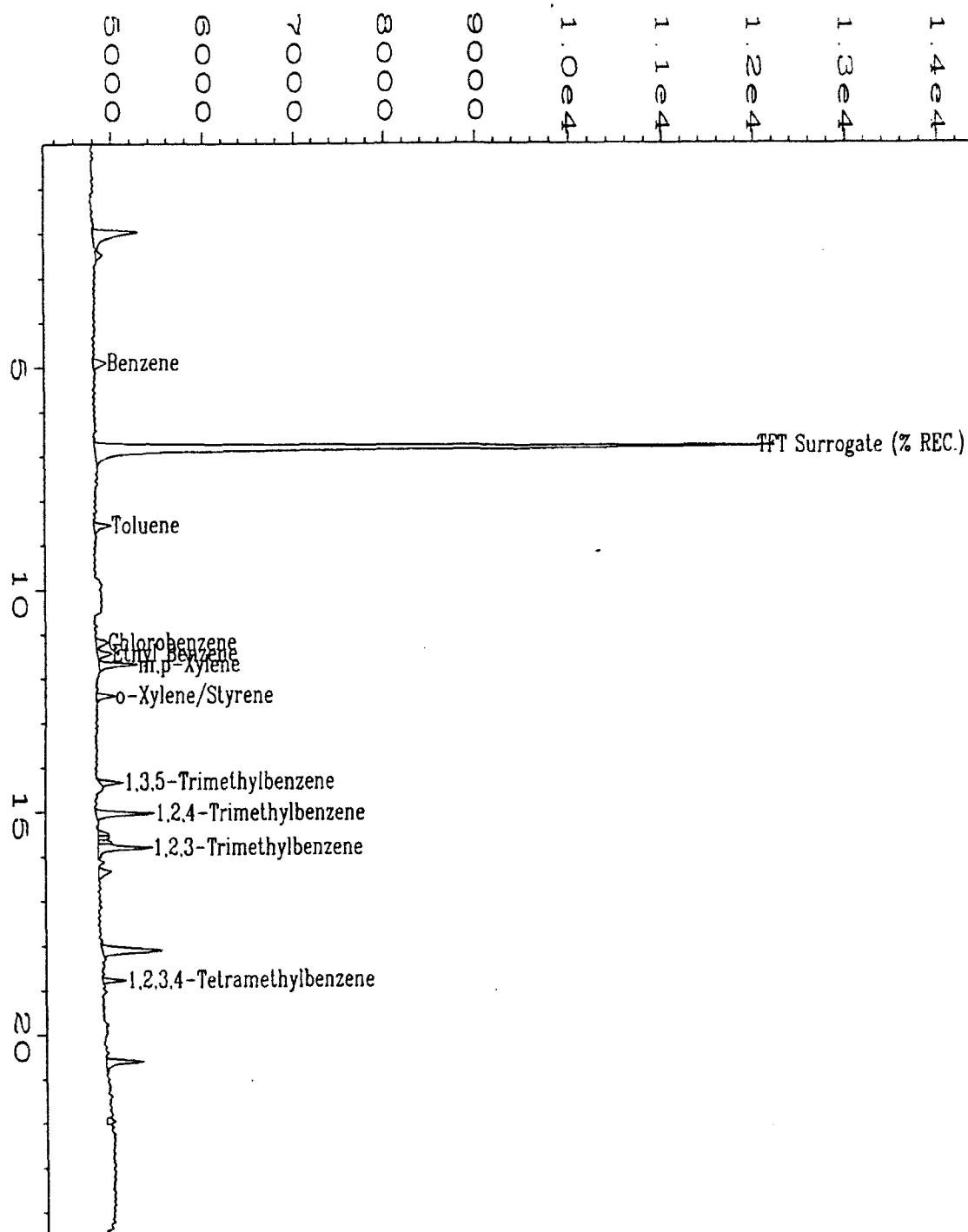
Data File Name : C:\HPCHEM\2\DATA\BX20321\010R0901.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX2 Vial Number : 10
 Sample Name : 1.0 ppb BTEX MIX Injection Number : 1
 Run Time Bar Code: Sequence Line : 9
 Acquired on : 21 Mar 95 04:44 PM Instrument Method: BX20321.MTH
 Report Created on: 22 Mar 95 08:57 AM Analysis Method : BX20321.MTH
 Last Recalib on : 22 Mar 95 08:53 AM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 2 in C:\HPCHEM\2\DATA\BX20321\010R0901.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
2.472	562	VV	0.093	1	0.898	
4.890	1177	PV	0.110	1	2.727	Benzene
6.805	48550	PV	0.100	1-R	94.975	TFT Surrogate (% REC.)
8.553	1297	PV	0.089	1	2.663	Toluene
11.183	1029	BV	0.099	1	2.691	Chlorobenzene
11.440	1070	VV	0.095	1	1.471	Ethyl Benzene
11.675	2403	VV	0.085	1	0.493	m,p-Xylene
12.389	1070	BV	0.076	1	1.698	o-Xylene/Styrene
14.330	1247	PV	0.073	1	0.439	1,3,5-Trimethylbenzene
15.030	3592	PV	0.084	1	1.226	1,2,4-Trimethylbenzene
15.240	* not found *			1		
15.488	484	BV	0.068	1	1.358	
15.797	3755	VV	0.089	1	0.580	1,2,3-Trimethylbenzene
16.331	1098	VV	0.101	1	13.315	
8.769	1068	PV	0.062	1	1.525	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
3	6.760	6.805	0.045

Not all calibrated peaks were found



Data File Name	: C:\HPCHEM\2\DATA\BX20321\010R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: 1.0 ppb BTEX MIX	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20321.H
Acquired on	: 21 Mar 95 04:44 PM	Analysis Method	: BX20321.MTH
Report Created on	: 21 Mar 95 05:09 PM	Sample Amount	: 0
Last Recalib on	: 21 Mar 95 03:32 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: STD REF #1644, 3/10/95, 0.5 UG/ML (M & P-XYLENE PRESENT); +		
	1,2,3 & 1,2,4-Trimethylbenzene		

External Standard Report

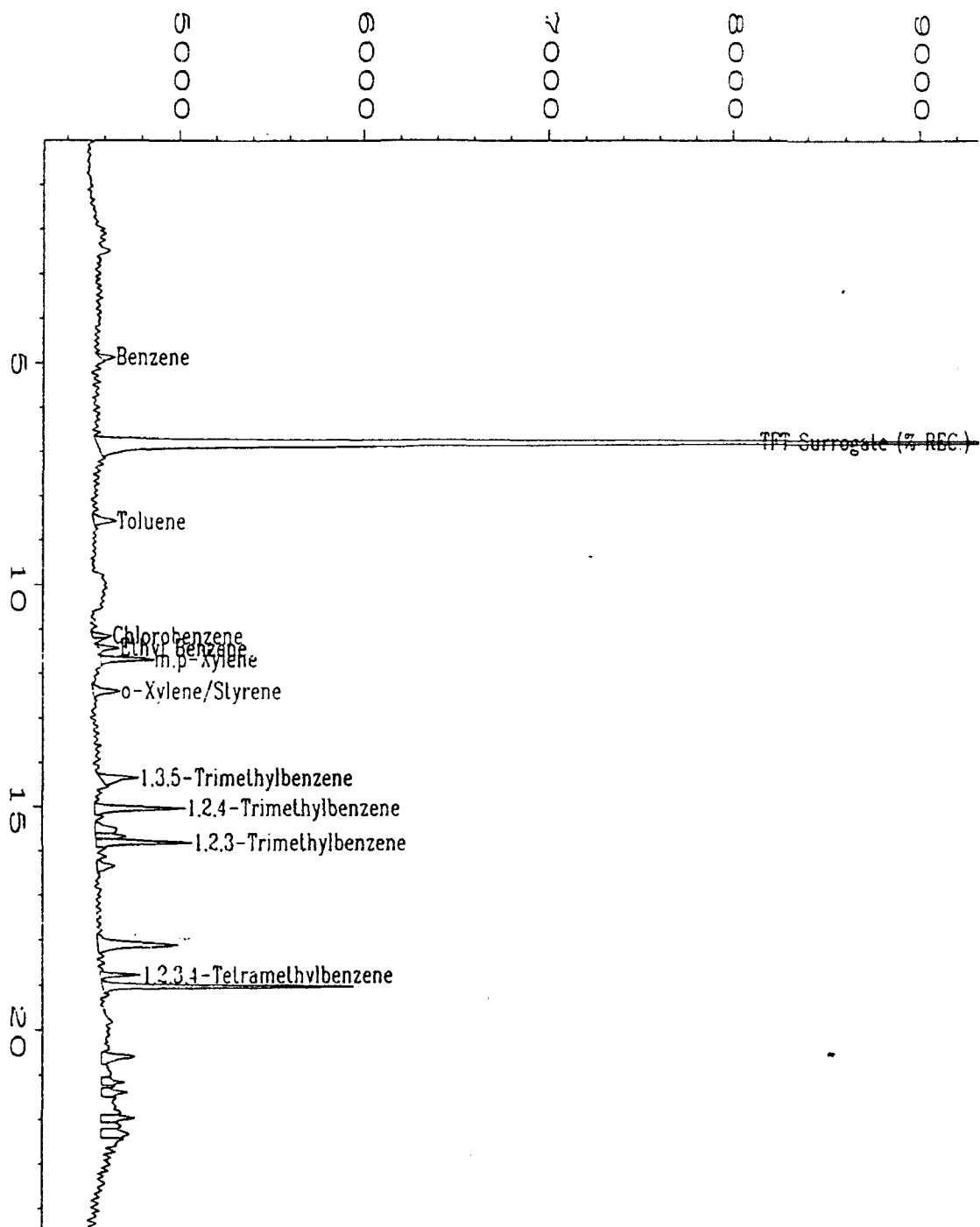
Data File Name : C:\HPCHEM\2\DATA\BX20322\008R0701.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX2 Vial Number : 8
 Sample Name : 1.0 ppb BTEX MIX Injection Number : 1
 Run Time Bar Code: Sequence Line : 7
 Acquired on : 22 Mar 95 04:24 PM Instrument Method: BX20322.MTH
 Report Created on: 23 Mar 95 08:56 AM Analysis Method : BX20322.MTH
 Last Recalib on : 22 MAR 95 04:04 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :
 Sample Info : STD REF #1644, 3/10/95, 0.5 UG/ML (M & P-XYLENE PRESENT); +
 1,2,3 & 1,2,4-Trimethylbenzene

Sig. 2 in C:\HPCHEM\2\DATA\BX20322\008R0701.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
2.452	* not found *			1		
4.860	438	PV	0.067	1	1.864	Benzene
6.789	39381	PV	0.099	1-R	87.650	TFT Surrogate (% REC.)
8.562	933	PV	0.094	1	1.820	Toluene
11.144	534	BV	0.069	1	1.698	Chlorobenzene
11.428	529	PV	0.064	1	0.289	Ethyl Benzene
11.672	1477	BV	0.077	1	-2.219	m,p-Xylene
12.389	1035	BV	0.093	1	1.133	o-Xylene/Styrene
14.332	1481	BV	0.103	1	-0.0133	1,3,5-Trimethylbenzene
15.022	2932	BV	0.083	1	1.035	1,2,4-Trimethylbenzene
15.240	* not found *			1		
15.484	1180	PV	0.154	1	4.187	
15.799	2933	VV	0.079	1	0.0762	1,2,3-Trimethylbenzene
16.330	794	VV	0.105	1	10.218	
18.764	948	VV	0.059	1	0.600	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
3	6.750	6.789	0.039

Not all calibrated peaks were found



Data File Name	: C:\HPCHEM\2\DATA\BX20322\008R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 8
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: 1.0 ppb BTEX MIX	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX20322 TH
Acquired on	: 22 Mar 95 04:24 PM	Analysis Method	: BX20322 TH
Report Created on:	22 Mar 95 04:50 PM	Sample Amount	: 0
Last Recalib on	: 22 Mar 95 04:04 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: STD REF #1644, 3/10/95, 0.5 UG/ML (M & P-XYLENE PRESENT); + 1,2,3 & 1,2,4-Trimethylbenzene		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)

Date Sampled : 3/15,16/95 Client Project Number : 722450.21020/MACDILL AFB
Date Received : 3/17/95 Lab Project Number : 95-0861
Date Prepared : 3/20/95 Matrix : Water
Date Analyzed : 3/20,21/95 Method Number : 5030/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH mg/L	MDL mg/L
MB032095	METHOD BLANK	100%	U	0.1
X04288	24MP-10D	114%	U	0.1
X04289	24MP-10S	103%	U	0.1
X04290	MD24-6A	116%	0.7	0.1
X04291	MD24-6	121%	U	0.1
X04291 DUP	MD24-6	98%	U	0.1
X04292	24MP-9D	124%	0.3	0.1
X04293	24MP-9S	121%	0.6	0.1
X04294	FIELD BLANK	123%	U	0.1
X04296	TRIP BLANK	128%	U	0.1
X04297	24MP-7D	106%	U	0.1
X04298	24MP-7S	113%	U	0.1
X04299	75MP-1S	120%	U	0.1
X04300	75MP-1D	124%	U	0.1

QUALIFIERS

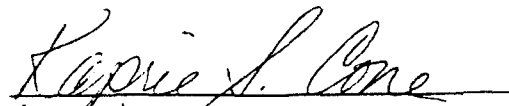
U = TVH analyzed for but not detected.

B = TVH found in blank as well as sample (blank data should be compared).

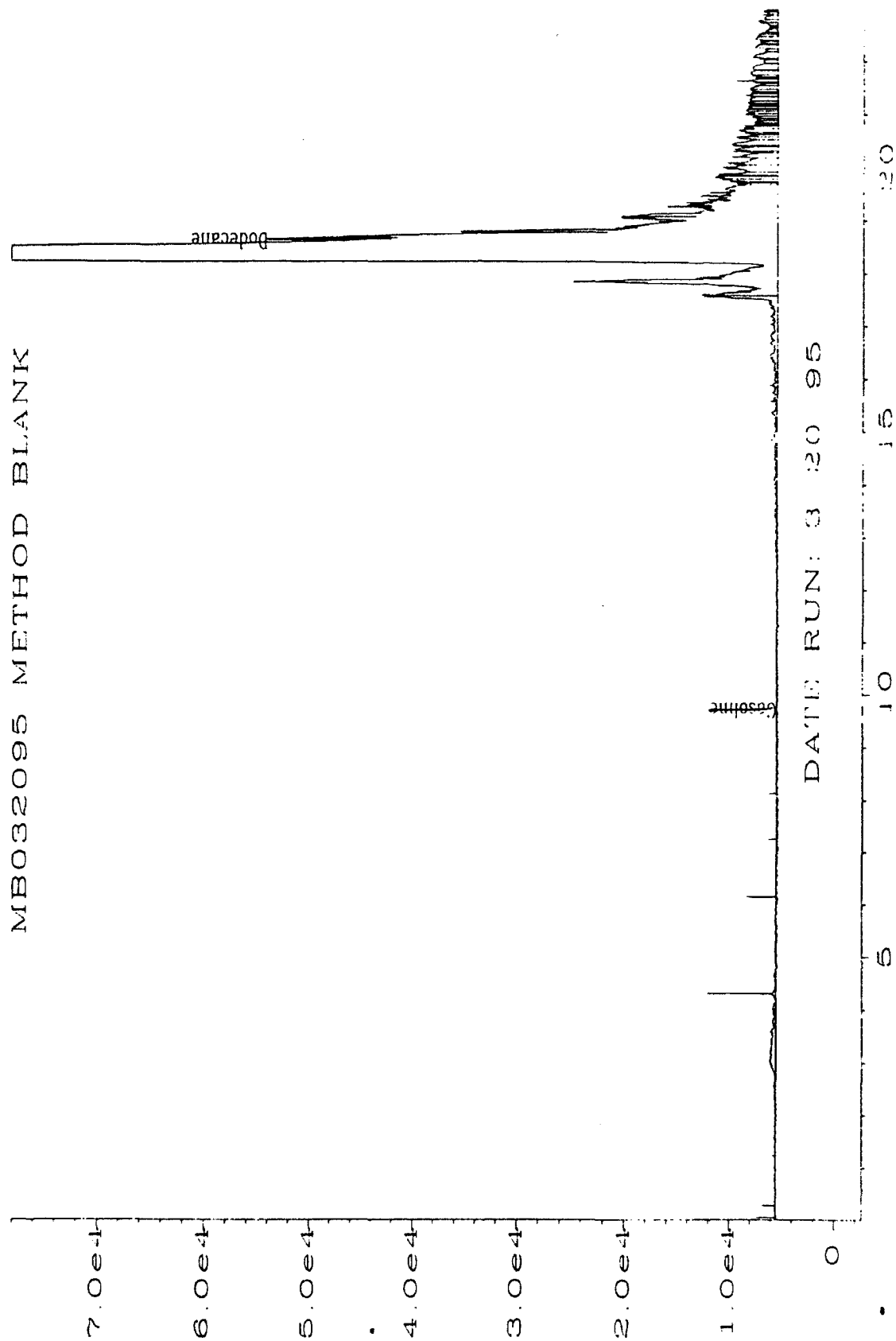
E = Extrapolated value.

MDL = Method Detection Limit


Analyst


Approved

MB032095 METHOD BLANK



Sig. 1 in C:\HPCHEM\1.D\TANTV\H0320\003F0101.D

X04288 DF=1 CLIENT#24MP-10D

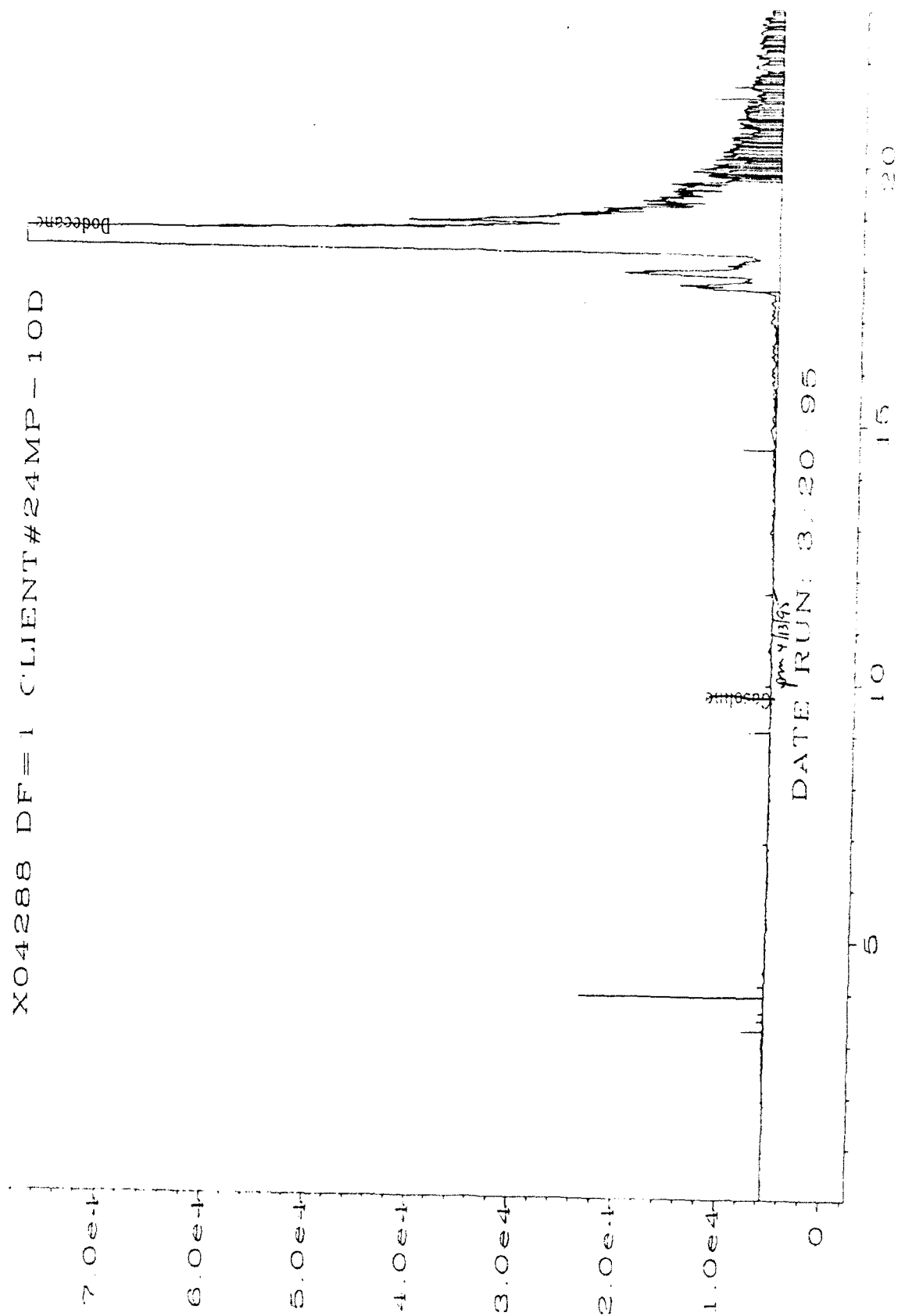


Fig. 1 in CNHPCHEM1 DATA TVH0320 010P0101.D

X04289 DF=1 CLIENT#24MP-10S

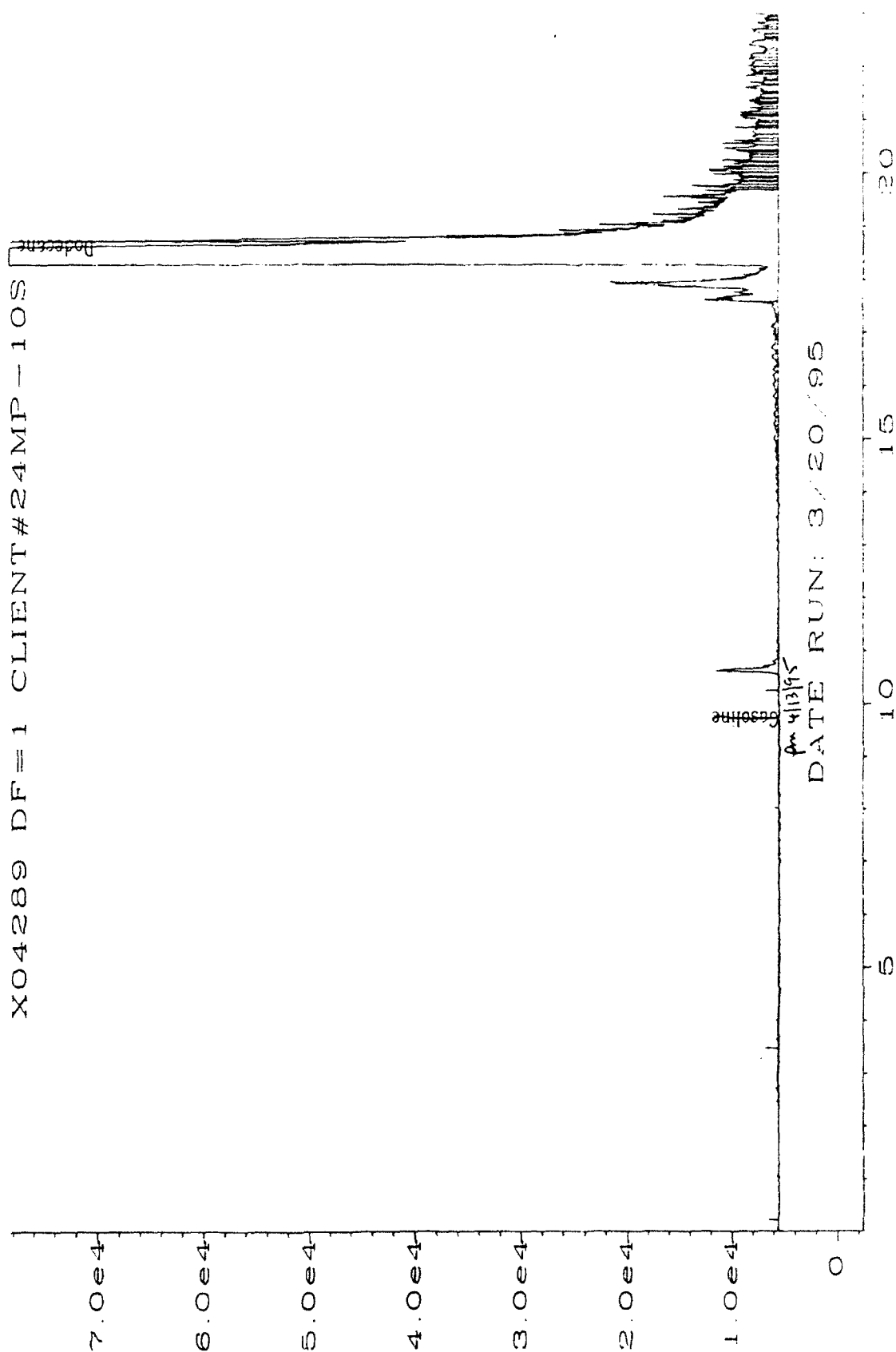
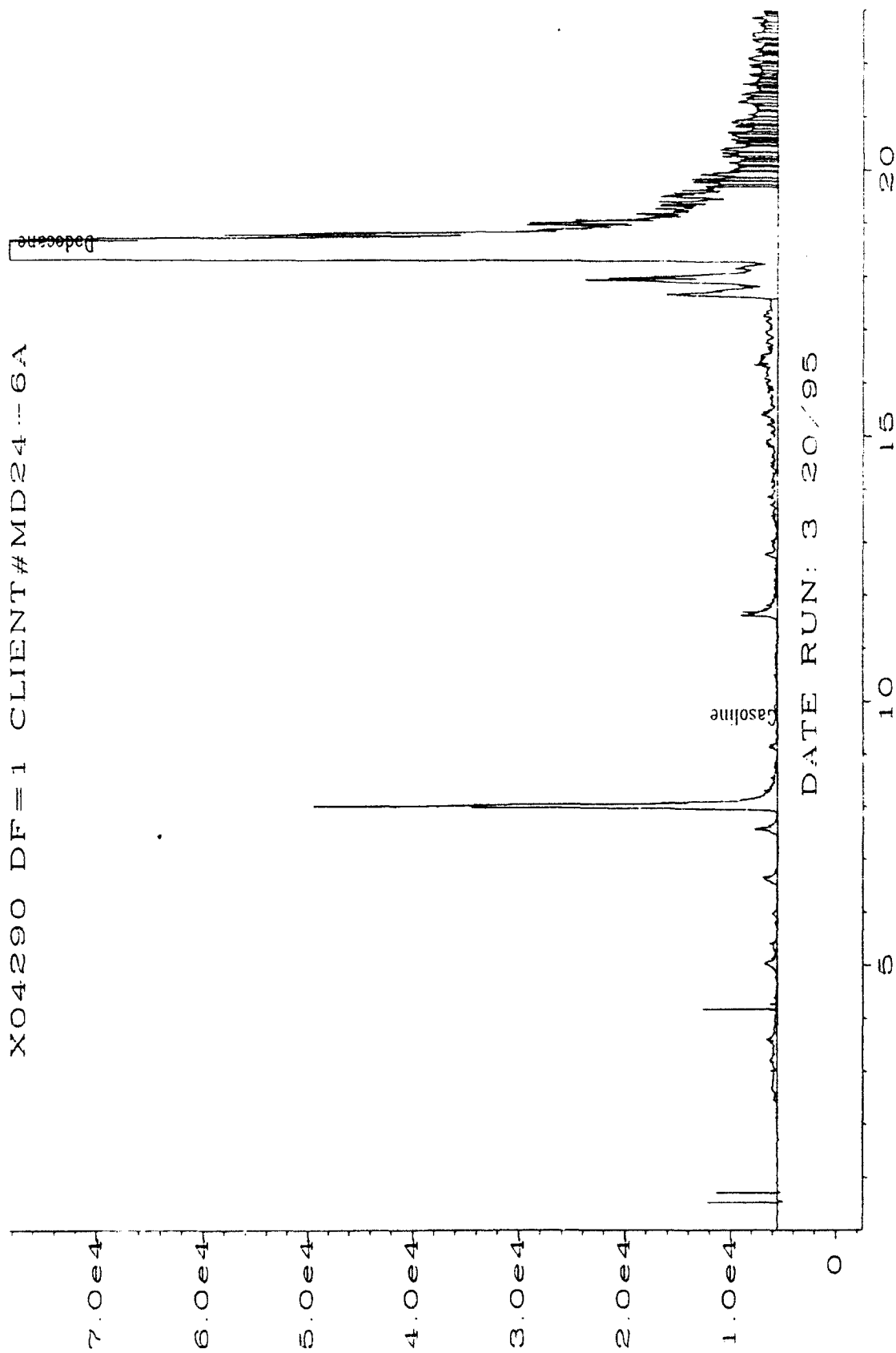


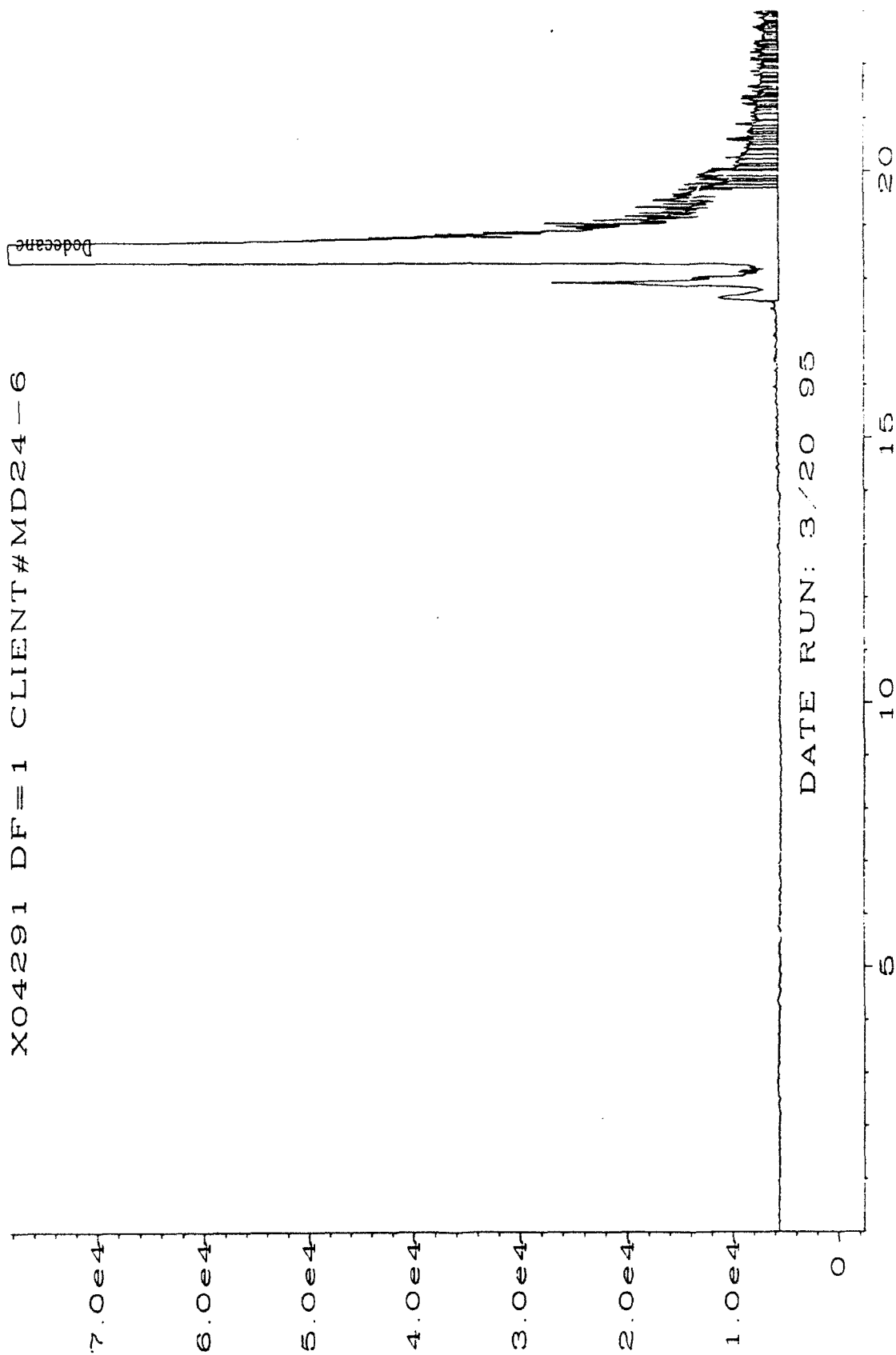
Fig. 1 in C:\NHPCHENT\INDATA\TVH0320\013F0101.D

X04290 DF=1 CLIENT#MD24--6A



Sig. 1 in C:\NHP\CHEM\1\DATA\TVH0320\NO14\F0101.D

X04291 DF=1 CLIENT#MD24-6



Sig. 1 in C:\NHP\CHEM\1\DATA TVH0320 015F0101.D

X04291 DUP

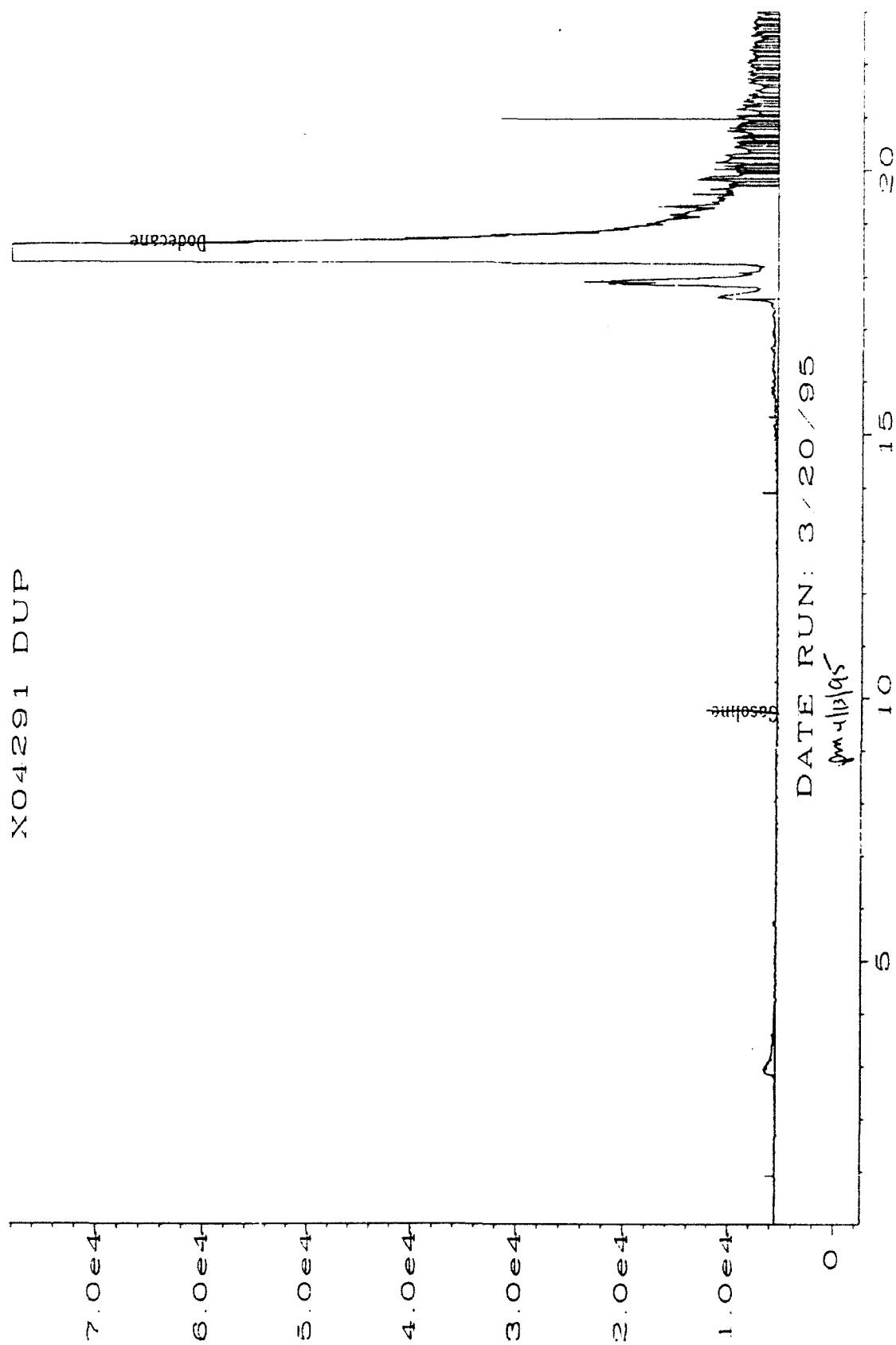
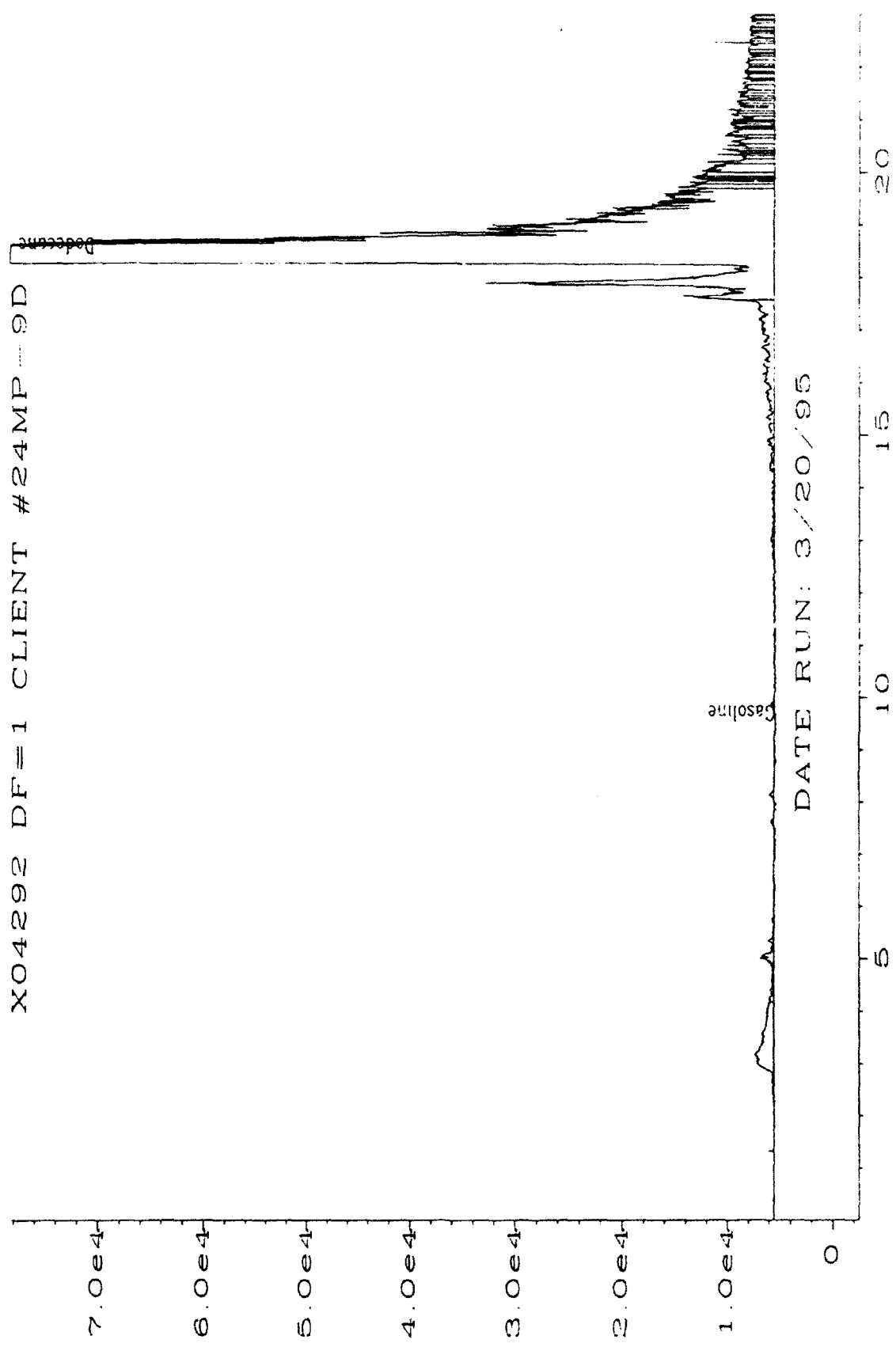


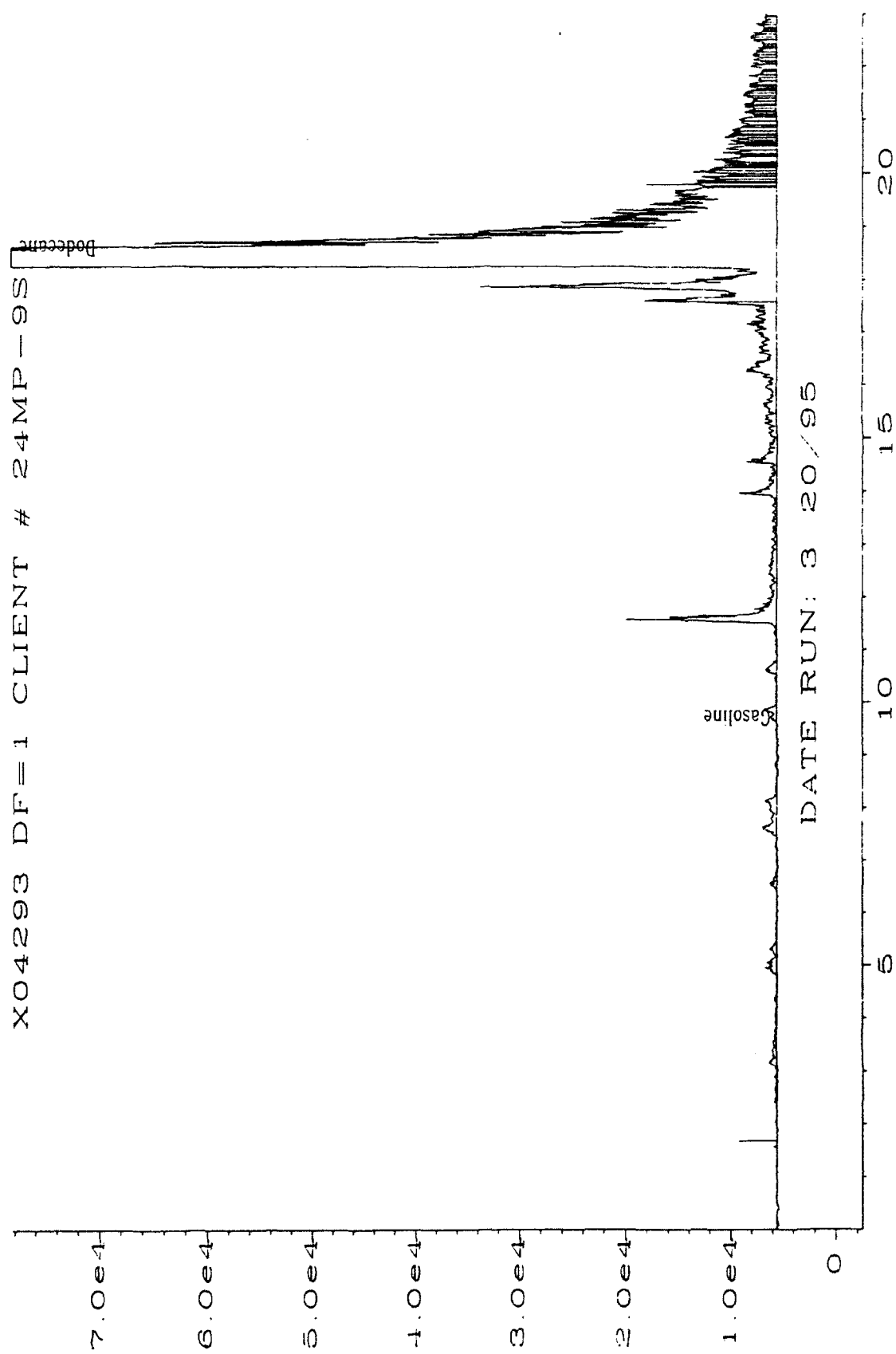
Fig. 1 in C:\HPCHEM\IN\DATA\TVH0320\016F0101.D

X04292 DF=1 CLIENT #24MP--9D



Sig. 1 in CNHPCHEM\DATA\TVH0320\017P0101.D

X04293 DF=1 CLIENT # 24MP-9S



Sig. 1 in C:\NHP\CHEM\1\DATA\TVH0320\018F0101.D

X04297 DF=1 CLIENT # 24MP-7D

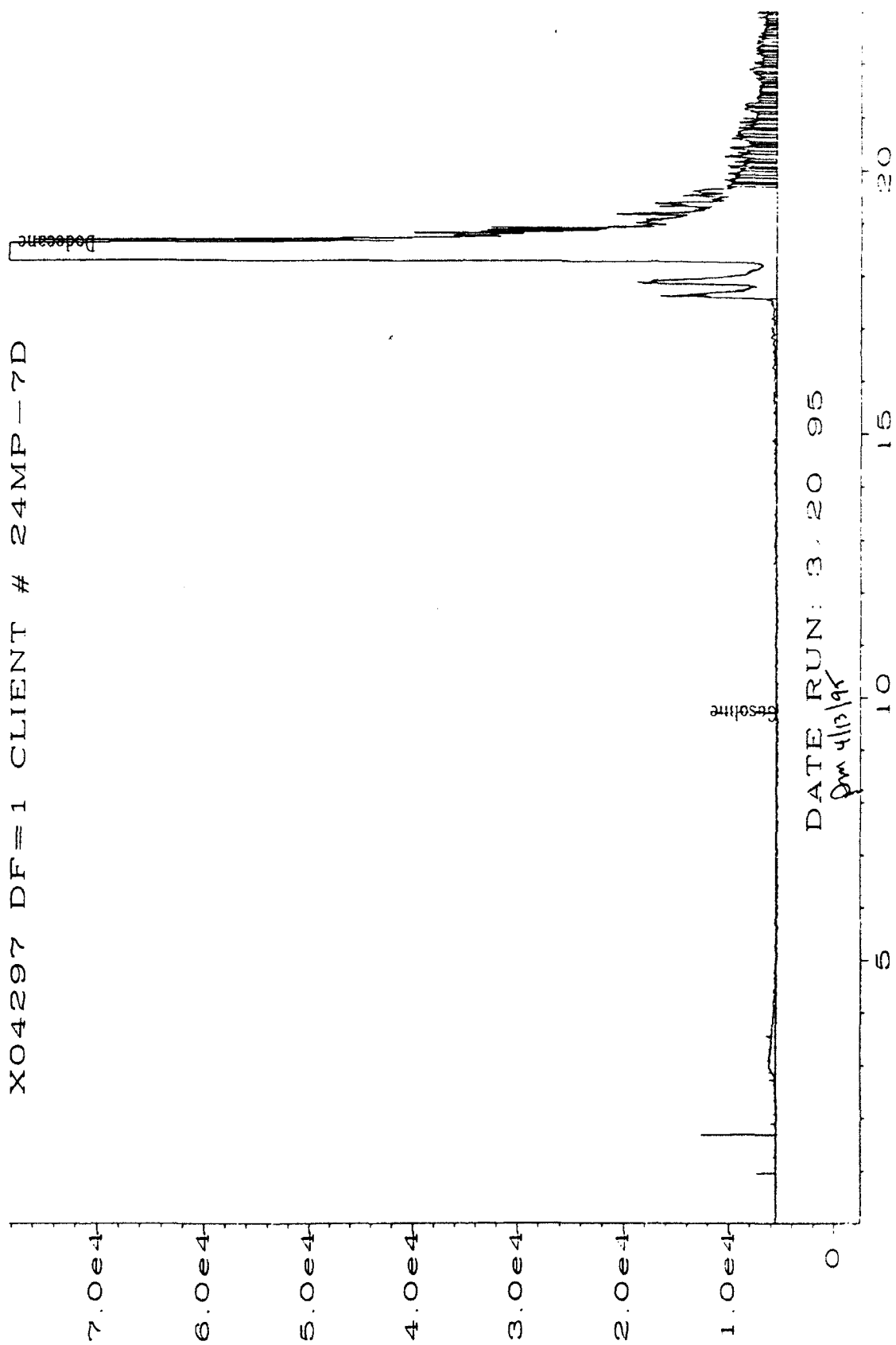
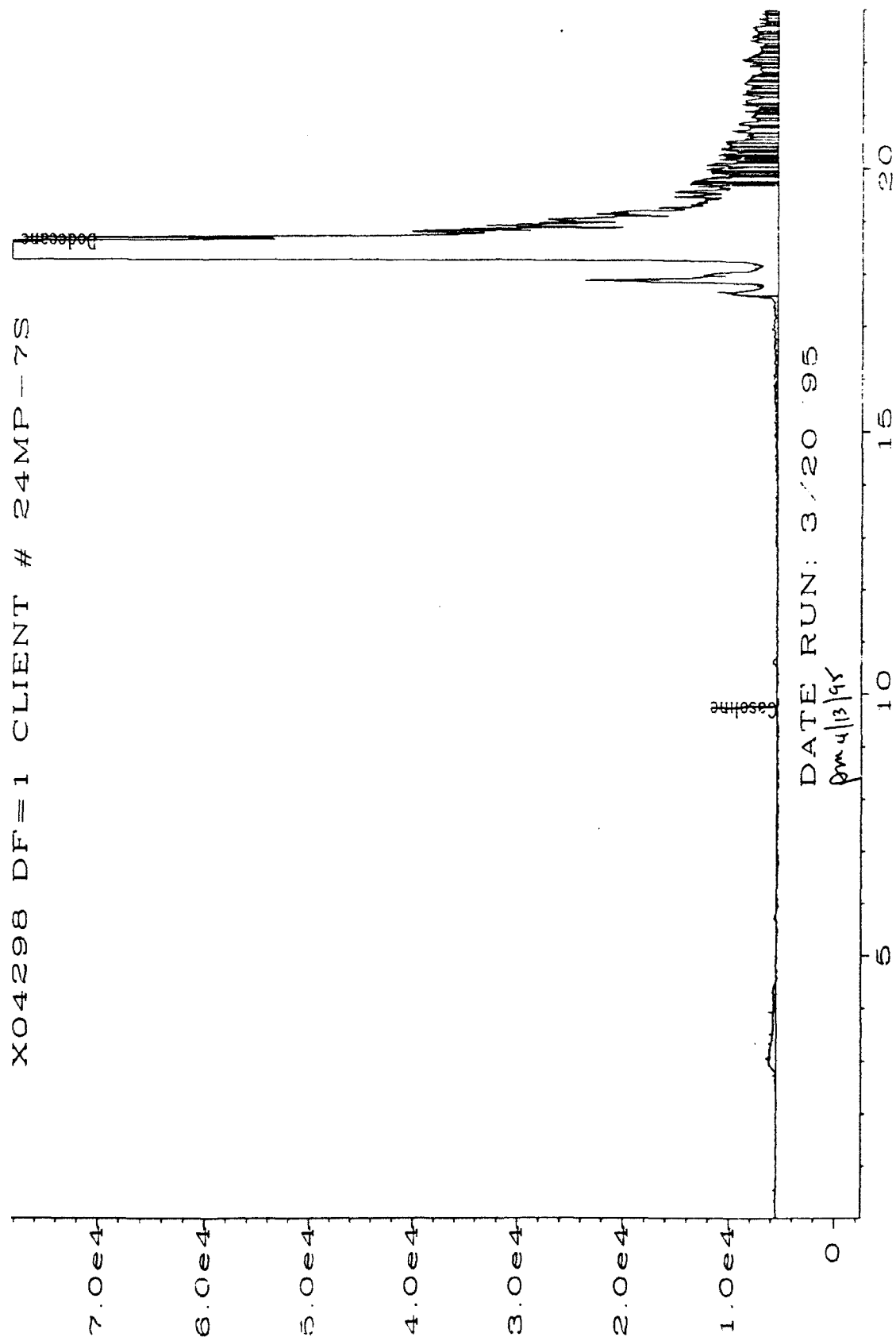


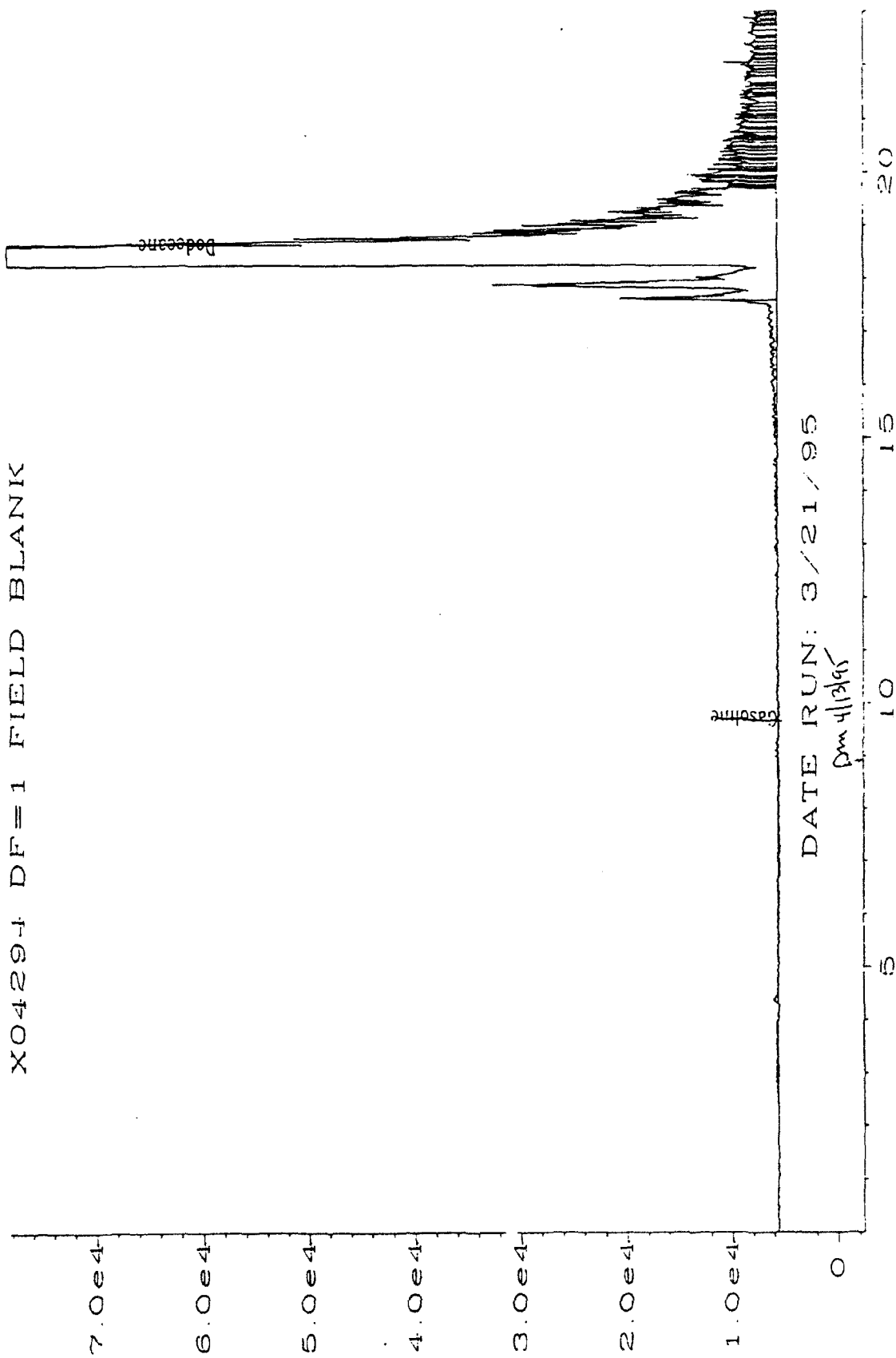
Fig. 1 in C:\HPCHEN\1 DATA TV\H0320 019F0101.D

X04298 DF=1 CLIENT # 24MP-7S



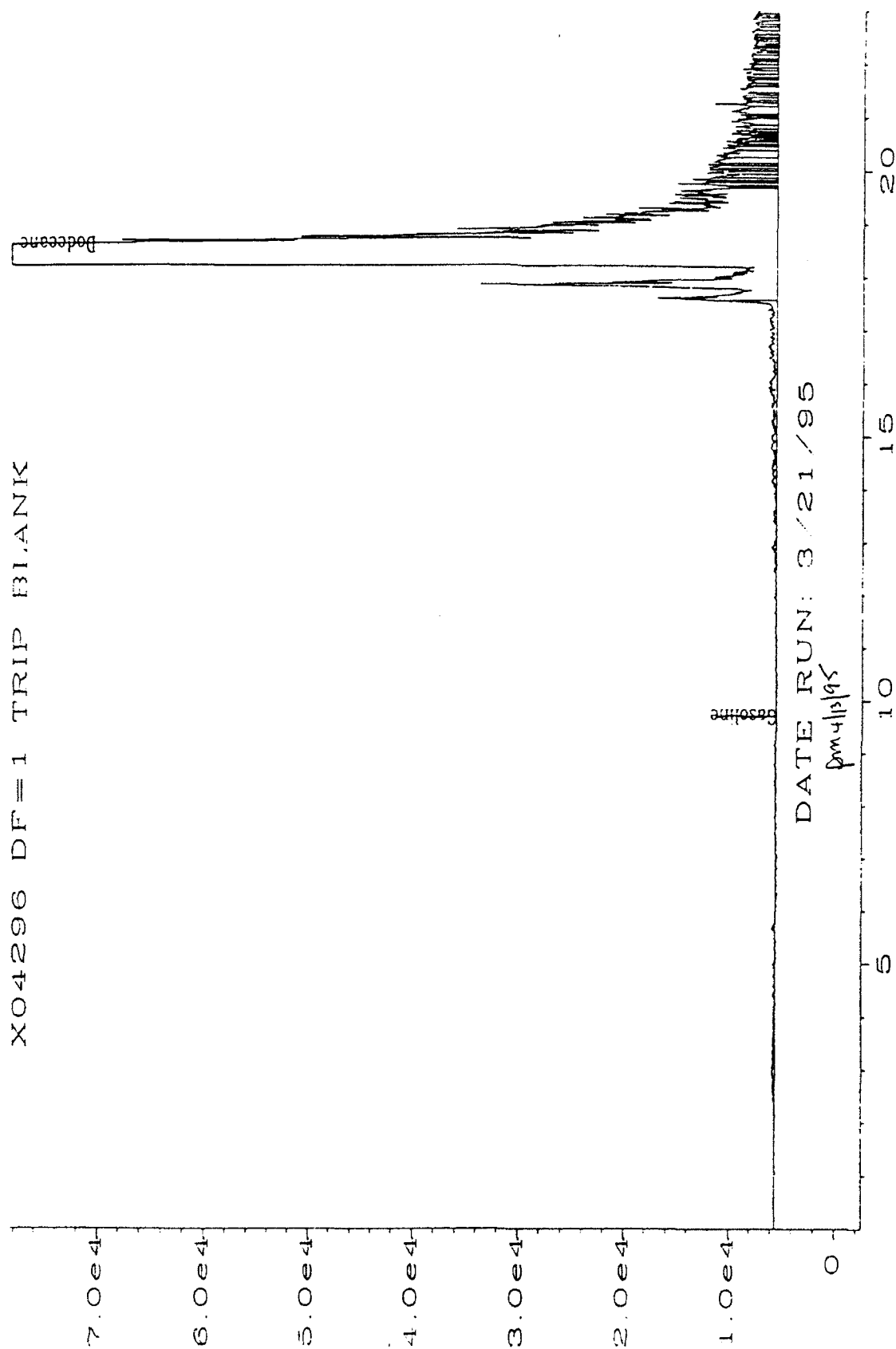
Sig. 1 in CNHPCHEM 1 DATA\TVH0320 020F0101.D

X04294 DF=1 FIELD BLANK



Sig. 1 in C:\NMR\CHEM\1 D \N\TV\H0320 023F0101.D

X04296 DF=1 TRIP BLANK



Sig. 1 in CNHPCHEM\DATA\T\H0320\02-1F0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS032095 Client Project Number : 722450.21020/MACDILL AFB
Date Prepared : 3/20/95 Lab Project Number : 95-0861
Date Analyzed : 3/20/95 Matrix : WATER
Sequence Number : TVH9 Method Number : 5030/8015 MOD

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/L</u>	<u>QC Limit mg/L</u>
Gasoline	5.00	5.39	3.5-6.5

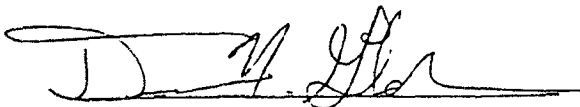
QUALIFIERS

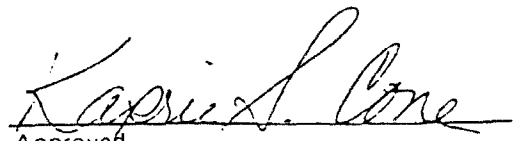
U = TEH analyzed for but not detected.

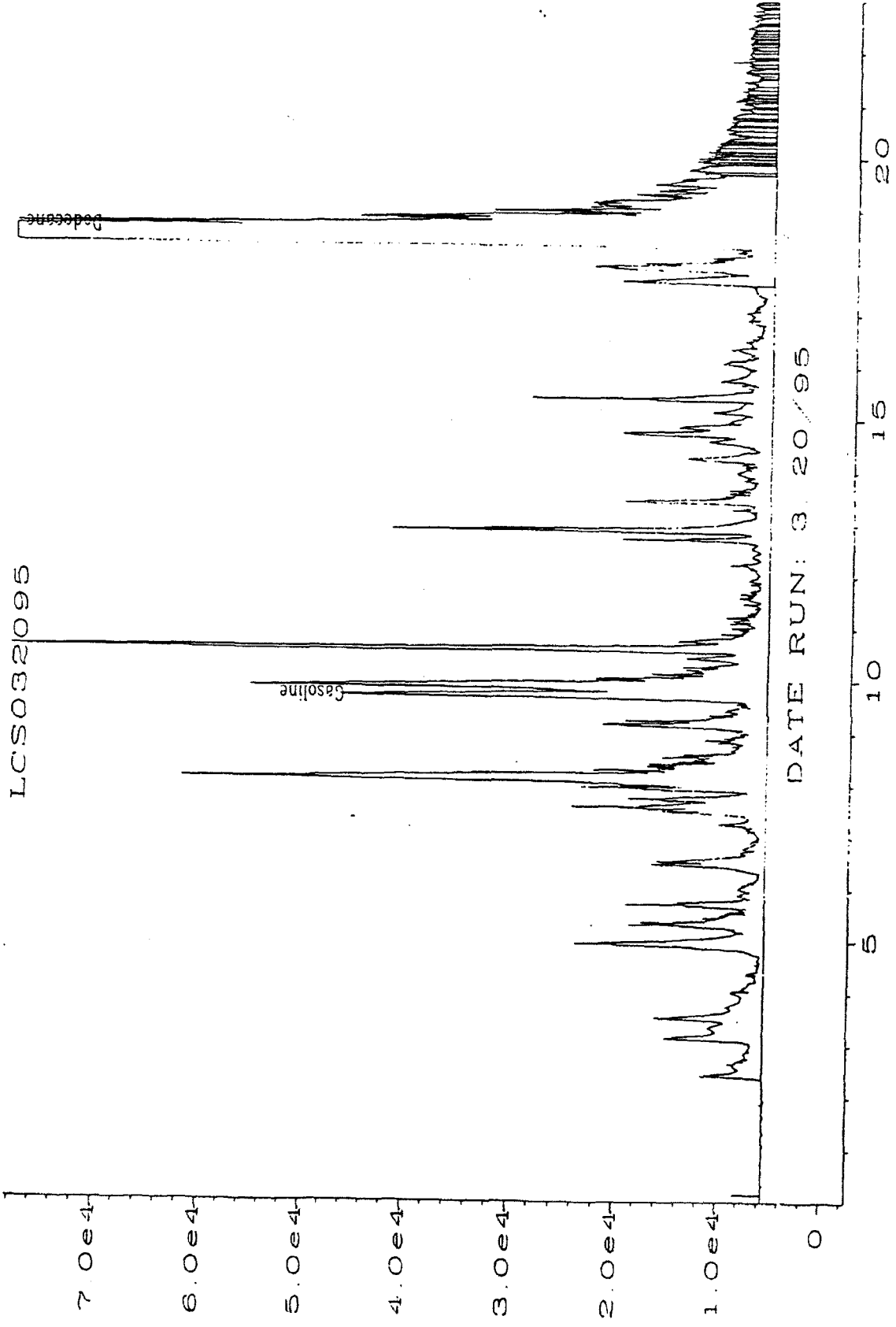
B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.


Analyst


Approved



Sig. 1 in C:\HPCHEM\1\DATA\TVH0320\0009F0101.D

EVERGREEN ANALYTICAL, INC.
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(303)425-6021

Anions

Date Sampled : 3/15,16/95 Client Project ID. : 722450.21020
Date Received : 3/16/95 Lab Project No. : /Mac Dill AFB
Date Prepared : 3/17/95 Method : 95-0861
Date Analyzed : 3/17/95 Matrix : EPA 300.0
Detection Limit : Water
 : 0.25 (mg/L)

Evergreen Sample #	Client Sample ID	Sulfate (mg/L)
X04288	24MP-10D	5.78~
X04289	24MP-10S	3.64
X04290	MD24-6A	7.34
X04291	MD24-6	6.38
X04292	24MP-9D	12.1
X04293	24MP-9S	1.91
X04297	24MP-7D	79.2
X04298	24MP-7S	76.0
X04299	75MP-1S	35.8
X04300	75MP-1D	15.1
X04300 Dup	75MP-1D Dup	14.7
Method Blank 3-17-95		<0.250

Quality Assurance

	Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04300 75MP-1D Matrix Spike	10.0	15.2	25.7	105
X04300 75MP-1D Matrix Spike Dup	10.0	15.2	25.3	102
MS/MSD RPD				3.09
X04300/X04300 Dup RPD				2.68

Debra L. Byers
Analyst

[Signature]
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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Anions

Date Sampled : 3/15,16/95 Client Project ID. : 722450.21020
Date Received : 3/16/95 Lab Project No. : /Mac Dill AFB
Date Prepared : 3/17/95 Method : 95-0861
Date Analyzed : 3/17/95 Matrix : EPA 300.0
Detection Limit : Water
 : 0.25 (mg/L)

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Chloride (mg/L)</u>
X04288	24MP-10D	144
X04289	24MP-10S	4.18
X04290	MD24-6A	16.8
X04291	MD24-6	637
X04292	24MP-9D	329
X04293	24MP-9S	12.1
X04297	24MP-7D	1130
X04298	24MP-7S	115
X04299	75MP-1S	13.4
X04300	75MP-1D	9.75
X04300 Dup	75MP-1D Dup	9.62
Method Blank 3-17-95		<0.250

Quality Assurance

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X04300	75MP-1D	10.0	9.75	20.1	104
	Matrix Spike				
X04300	75MP-1D	10.0	9.75	20.0	102
	Matrix Spike Dup				
	MS/MSD RPD				1.36
X04300/X04300 Dup	RPD				1.34

Debra L. Byrum
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 3/15,16/95 Client Project ID. : 722450.21020
Date Received : 3/16/95 Lab Project No. : /Mac Dill AFB
Date Prepared : 3/17/95 Method : EPA 300.0
Date Analyzed : 3/17/95 Matrix : Water
Detection Limit : 0.076 (mg/L)

Evergreen Sample #	Client Sample ID	Nitrite-N (mg/L)
X04288	24MP-10D	<0.076
X04289	24MP-10S	<0.076
X04290	MD24-6A	<0.076
X04291	MD24-6	<0.760*
X04292	24MP-9D	<0.760*
X04293	24MP-9S	<0.076
X04297	24MP-7D	<7.60*
X04298	24MP-7S	<0.760*
X04299	75MP-1S	<0.076
X04300	75MP-1D	<0.076
X04300 Dup	75MP-1D Dup	<0.076
Method Blank 3-17-95		<0.076

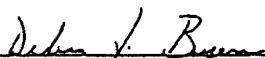
Quality Assurance**

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04300	75MP-1D Matrix Spike	10.0	<0.250	9.86	98.6
X04300	75MP-1D Matrix Spike Dup	10.0	<0.250	9.05	90.5
MS/MSD RPD					8.57
X04300/X04300 Dup RPD					NC

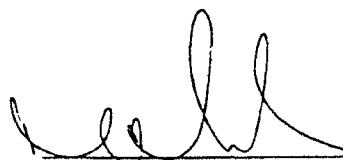
* = Increased detection limit due to matrix interference.

** = Quality assurance results reported as Nitrite (NO₂).

NC = Not Calculated because sample and/or duplication results below
detection limit.



Analyst



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(303)425-6021

Anions

Date Sampled : 3/15,16/95 Client Project ID. : 722450.21020
Date Received : 3/16/95 Lab Project No. : /Mac Dill AFB
Date Prepared : 3/17/95 Method : EPA 300.0
Date Analyzed : 3/17/95 Matrix : Water
Detection Limit : 0.056 (mg/L)

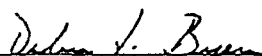
<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Nitrate-N (mg/L)</u>
X04288	24MP-10D	<0.056
X04289	24MP-10S	<0.056
X04290	MD24-6A	<0.056
X04291	MD24-6	2.46
X04292	24MP-9D	<0.056
X04293	24MP-9S	<0.056
X04297	24MP-7D	<0.056
X04298	24MP-7S	<0.056
X04299	75MP-1S	<0.056
X04300	75MP-1D	<0.056
X04300 Dup	75MP-1D Dup	<0.056
Method Blank 3-17-95		<0.056

Quality Assurance**

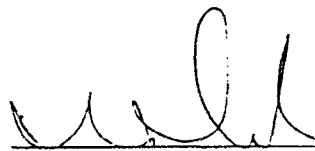
		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X04300	75MP-1D Matrix Spike	10.0	<0.250	9.63	96.3
X04300	75MP-1D Matrix Spike Dup	10.0	<0.250	9.42	94.2
MS/MSD RPD					2.20
X04300/X04300 Dup RPD					NC

** = Quality assurance results reported as Nitrate (NO₃).

NC = Not Calculated because sample and/or duplication results below detection limit.



Analyst



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(303)425-6021

Miscellaneous Analyses

Date Sampled : 3/15,16/95 Client Project ID. : 722450.21020
Date Received : 3/17/95 Lab Project No. : MacDill AFB
Date Prepared : 3/18/95 Detection Limit : 95-0861
Date Analyzed : 3/18/95 Method : 5.00 mgCaCO₃/L
EPA 310.1

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Total Alkalinity (mgCaCO₃/L)</u>
X04288	24MP-10D	Water	227
X04289	24MP-10S	Water	187
X04290	MD24-6A	Water	309
X04291	MD24-6	Water	173
X04292	24MP-9D	Water	205
X04293	24MP-9S	Water	271
X04297	24MP-7D	Water	200
X04298	24MP-7S	Water	244
X04299	75MP-1S	Water	74.2
X04299 Duplicate	75MP-1S Duplicate	Water	73.7
X04300	75MP-1D	Water	<5.00

Method Blank 3/18/95

<5.00

Quality Assurance

	<u>True Value</u> (mgCaCO ₃ /L)	<u>Result</u> (mgCaCO ₃ /L)	<u>% Recovery</u>
APG Reference Minerals Lot #13862	11.8	10.3	87.3
X04299/X04299 Dup RPD			0.680

Analyst

Approved

0861JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)

Date Sampled : 3/15,16/95 Client Project Number : 722450.21020/MACDILL AFB
Date Received : 3/17/95 Lab Project Number : 95-0861
Date Prepared : 3/20/95 Matrix : Water
Date Analyzed : 3/20,21/95 Method Number : 5030/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH mg/L	MDL mg/L
MB032095	METHOD BLANK	100%	U	0.1
X04288	24MP-10D	114%	U	0.1
X04289	24MP-10S	103%	U	0.1
X04290	MD24-6A	116%	0.7	0.1
X04291	MD24-6	121%	U	0.1
X04291 DUP	MD24-6	98%	U	0.1
X04292	24MP-9D	124%	0.3	0.1
X04293	24MP-9S	121%	0.6	0.1
X04294	FIELD BLANK	123%	U	0.1
X04296	TRIP BLANK	128%	U	0.1
X04297	24MP-7D	106%	U	0.1
X04298	24MP-7S	113%	U	0.1
X04299	75MP-1S	120%	U	0.1
X04300	75MP-1D	124%	U	0.1

QUALIFIERS

U = TVH analyzed for but not detected.

B = TVH found in blank as well as sample (blank data should be compared).

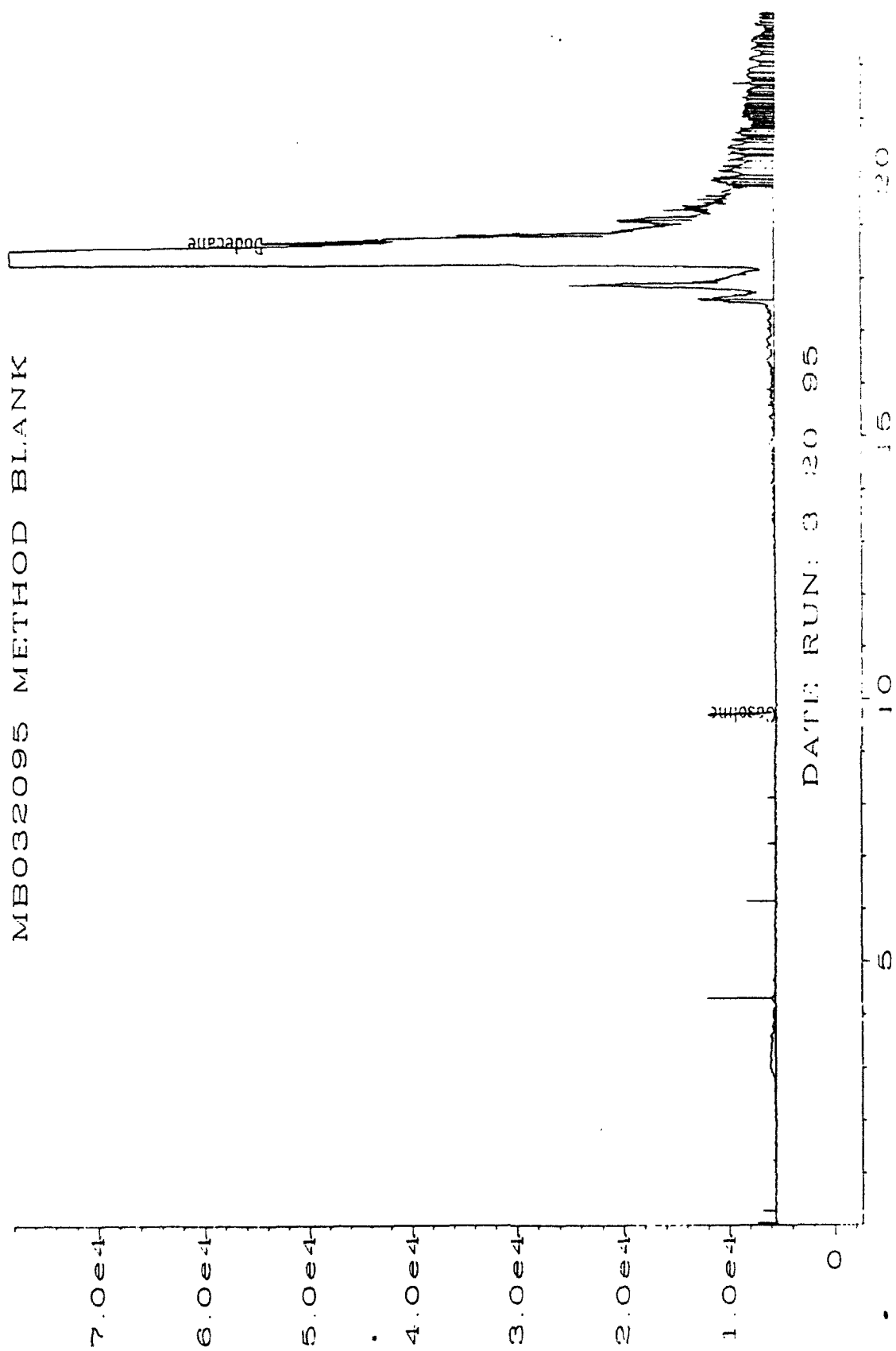
E = Extrapolated value.

MDL = Method Detection Limit


Analyst

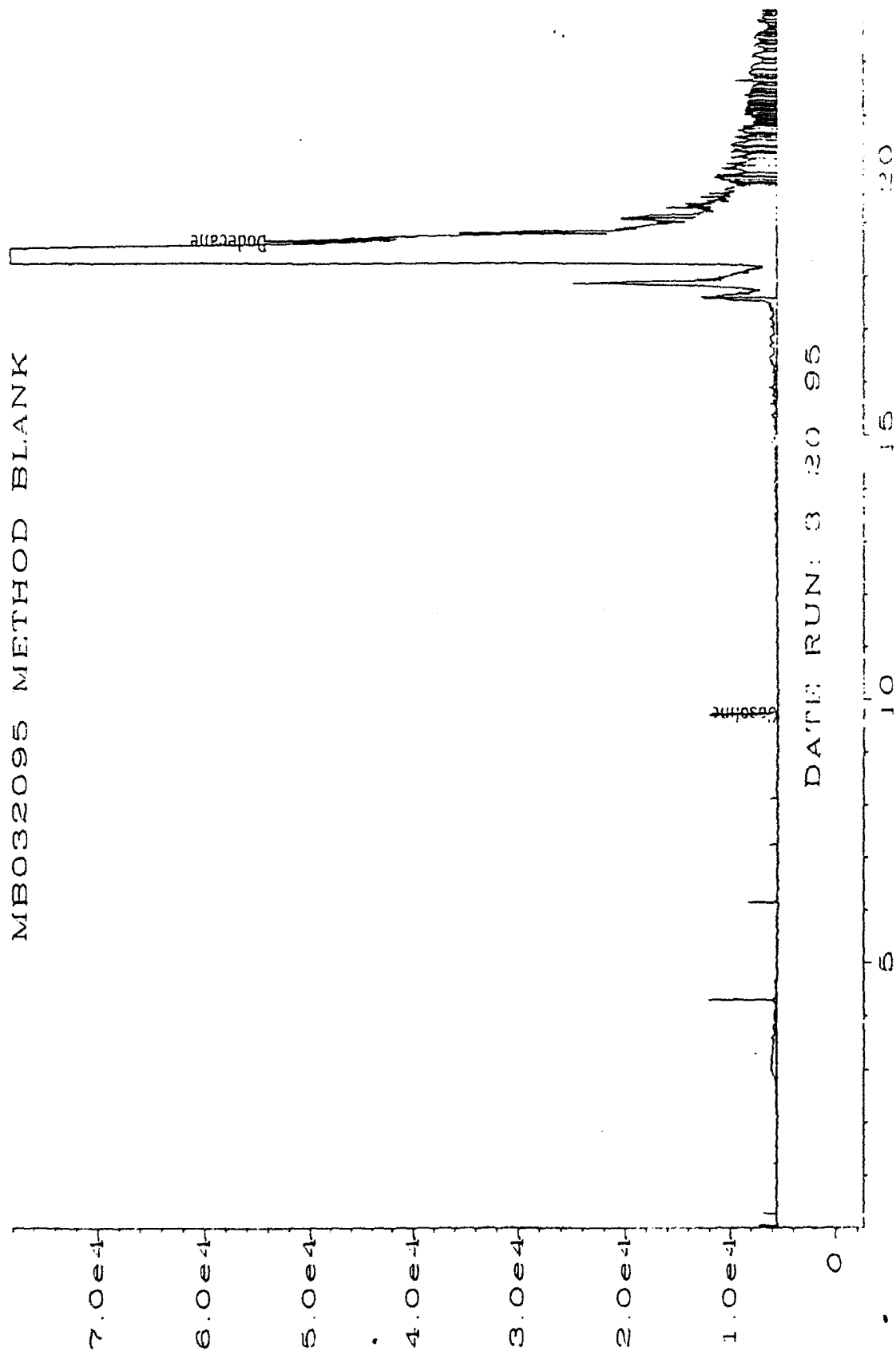

Approved

MB032095 METHOD BLANK



Sig. 1 in C:\HPCHEM\1\DATA\TVH0320\003F0101.D

MB032095 METHOD BLANK



Sig. 1 in C:\HPCHEM\1\DATA\TANH0320\003F0101.D

pm, 1/3 1e-1



CASE NARRATIVE

Evergreen Analytical Laboratory Project (EAL) #: 95-0820

Parsons Engineering Science, Inc. (PES) Project: MacDill AFB
(722450.21020)

Sample Receipt

On March 14, 1995, 14 soil and one rinseate blank were received in good condition at Evergreen Analytical Laboratory (EAL). Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

BTEX, Soil Matrix, Method SW8020

The following PES samples were analyzed at a dilution due to target analytes in the sample, the reporting levels were increased accordingly; 24 MP-1A(3'-4'), 24 MP-2(3'-4'), 24 SS-2(4'-6'), 75SS-1(7-9), and 75SS-2(9-11) at a dilution factor of 5. Sample 75SS-1(3-5) was analyzed at DF = 5 and DF = 125, and 75SS-2(3-5) at DF = 250 and DF = 1250.

The matrix spike sample exhibited surrogate recoveries for the tri- and tetra-methylbenzenes below the EAL control limit, and the matrix spike duplicate sample did not purge. Please see the Laboratory Control Spike (LCS) sample for acceptable spiked sample recovery.

BTEX, Water Matrix, Method 602

The Trip Blank was analyzed with no anomalies to report.

Total Volatile Hydrocarbon (TVH), Soil Matrix, Method 8015M

The relative percent difference (RPD) between the laboratory duplicate samples were not within the control limit of 30% due to sample inhomogeneity. There were no other quality control anomalies to report.

Total Extractable Hydrocarbon (TEH), Soil Matrix, Method 8015M

The surrogate recovery for 75SS-2(3-5) was outside the control limits due to the concentration of analyte in the sample. All other quality control was within limits.

Page Two
Case Narrative
Parsons Engineering Science
95-0820

Total Organic Carbon in Soil (TOC)

TOC was analyzed by Huffman Laboratories of Golden, Colorado. TOC was determined by analyzing for total carbon (TC) and inorganic (carbonate) carbon (CC), then calculating the difference as TOC. The report from Huffman is included.



Patricia A. McClellan, Project Manager

Evergreen Analytical Sample Log Sheet

Project # 95-0820

Date(s) Sampled: 03/08,09,10,13/95 COC

Date Due: 03/17/95

ate Received: 03/14/95 1000

Holding Time(s): 03/22,23,27-BTEX,

TEPH, TVPH

Client Project I.D. 722450.21020/MAC DILL

Rush STANDARD

Client: PARSONS ENGINEERING SCIENCE, INC.

Shipping Charges N/A

Address: 1700 BROADWAY, SUITE 900

E.A. Cooler # 604

DENVER, CO 80290

Airbill # FED EX 9581826236

Contact: TODD WIEDEMEIER

Custody Seal Intact? N/A

Cooler Bottles

Client P.O.

COC Present Y

Sample Tags Present? Y

Phone #831-8100 Fax #831-8208

Sample Tags Listed? Y

Sample(s) Sealed? Y

Special Invoicing/Billing

SpecilaSpecial Instructions * PLUS CHLOROBENZENE, TMB & TEMB. REPORT SOILS ON
A DRY WEIGHT BASIS. ANALYZE AN MS/MSD AND LAB DUPLICATE FOR THIS CLIENT.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
04173A/B	24 MP-1A(3'-4')	* BTEX <u>8020</u>	S	2WM	2
X04174A/B	24 MP-1B(8'-9')	* BTEX	S	2WM	2
X04175A/B	24 MP-2 (3'-4')	* BTEX	S	2WM	2
X04176A/B	24 MP-3 (3-5)	* BTEX	S	2WM	2
X04177A/B	24 MP-4 (3-5)	* BTEX	S	2WM	2
X04178A/B	24 MP-5 (3-5)	* BTEX	S	2WM	2
X04179A/B	24 MP-6 (4-6)	* BTEX	S	2WM	2
X04181A/B	24SS-1 (4-6)	* BTEX	S	2WM	2
X04182A/B	24SS-2 (4-6)	* BTEX	S	2WM	2
X04183A/B	75SS-1 (3-5)	* BTEX	S	2WM	2
X04184A/B	75SS-1 (7-9)	* BTEX (<u>% moisture</u>)	S	2WM	2
X04185A/B	75SS-2 (3-5)	* BTEX	S	2WM	2
X04186A/B	75SS-2 (9-11)	* BTEX	S	2WM	2
X04187A	TRIP BLANK	* BTEX	W	40V	2

R=Sample to be returned

Route GC/MS GC 4 Metals Wet Chem 1 SxPrep 1 Acctg 1

To SxRec C QA/QC C Sales C File Orig

ge 1 of 1 Page(s)

Custodian/Date: JW 3/14/95

Am 3/15/95

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04173C	24 MP-1A(3'-4')	TVH MSCIS GMSCCMP	S	2WM	2
X04174C	24 MP-1B(3'-9')	TVH	S	2WM	2
X04175C	24 MP-2 (3'-4')	TVH	S	2WM	2
X04176C	24 MP-3 (3-5)	TVH	S	2WM	2
X04177C	24 MP-4 (3-5)	TVH	S	2WM	2
X04178C	24 MP-5 (3-5)	TVH	S	2WM	2
X04179C	24 MP-6 (4-6)	TVH	S	2WM	2
X04181C	24SS-1 (4-6)	TVH	S	2WM	2
X04182C	24SS-2 (4-6)	TVH	S	2WM	2
X04183C	75SS-1 (3-5)	TVH	S	2WM	2
X04184C	75SS-1 (7-9)	TVH	S	2WM	2
X04185C	75SS-2 (3-5)	TVH	S	2WM	2
X04186C	75SS-2 (9-11)	TVH	S	2WM	2
X04173D	24 MP-1A(3'-4')	TEH	S	2WM	B2
X04174D	24 MP-1B(8'-9')	TEH (% MOISTURE)	S	2WM	B2
X04175D	24 MP-2(3'-4')	TEH MSCIS JPS	S	2WM	B2
X04176D	24 MP-3 (3-5)	TEH	S	2WM	B2
X04177D	24 MP-4 (3-5)	TEH	S	2WM	B2
X04178D	24 MP-5 (3-5)	TEH	S	2WM	B2
X04179D	24 MP-6 (4-6)	TEH	S	2WM	B2
X04181D	24SS-1 (4-6)	TEH	S	2WM	B2
X04182D	24SS-2(4-6)	TEH	S	2WM	B2
X04183D	75SS-1 (3-5)	TEH	S	2WM	B2
X04184D	75SS-1 (7-9)	TEH	S	2WM	B2
X04185D	75SS-2(3-5)	TEH	S	2WM	B2
X04186D	75SS-2(9-11)	TEH	S	2WM	B2
X04173E	24 MP-1A(3'-4')	% MOISTURE	S	2WM	B2
X04175E	24 MP-2(3'-4')	% MOISTURE	S	2WM	B2
X04176E	24 MP-3 (3-5)	% MOISTURE	S	2WM	B2
X04177E	24 MP-4 (3-5)	% MOISTURE	S	2WM	B2
X04178E	24 MP-5 (3-5)	% MOISTURE	S	2WM	B2
X04179E	24 MP-6 (4-6)	% MOISTURE	S	2WM	B2
X04181E	24SS-1 (4-6)	% MOISTURE	S	2WM	B2
X04182E	24SS-2(4-6)	% MOISTURE	S	2WM	B2
X04183E	75SS-1 (3-5)	% MOISTURE	S	2WM	B2
X04184E	75SS-1 (7-9)	% MOISTURE	S	2WM	B2

Page 2 of 3 Pages
Project # 95-0820

R=Sample to be returned

Lab	Client				
ID #	ID#	Analysis	Mtx	Btl	Loc
X04185E	75SS-2(3-5)	% MOISTURE ✓	S	2WM	B2
X04186E	75SS-2(9-11)	% MOISTURE	S	2WM	B2
X04176D	24 MP-3 (3-5)	TOC ✓	S	2WM	OUT
X04177D	24 MP-4 (3-4)	TOC ✓	S	2WM	OUT
X04179D	24 MP-6 (4-6)	TOC ✓	S	2WM	OUT
X04180A	24 MP-16 (4-6)	TOC(% MOISTURE) ✓	S	2WM	OUT

Page 3 of 3 Pages

Project # 95-0820

R=Sample to be returned

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Engineering Science
ADDRESS 1700 Broadway Ste 700
CITY Denver STATE CO ZIP 80202
PHONE# 331-8104 FAX#

CLIENT CONTACT (print) J. J. J. J. J.

PROJECT I.D. 722450.27020

EAL QUOTE # _____ P.O.# _____

TURNAROUND REQUIRED* _____

*expedited turnaround subject to additional fee

Page 1 of 2

Sample Name Kyle Cannon
(Signature) _____
(print) _____

Evergreen Analytical Cooler No. 604
Cooler Received _____

PRINT

Please provide all information:

CLIENT SAMPLE IDENTIFICATION DATE SAMPLED TIME

24MP-1A (3-4)	3-8-95	1105	5
24MP-1B (8-9)	3-8-95	1205	5
24MP-2A (3-4)	3-8-95	1405	5
24MP-3A (3-5)	3-9-95	0900	5
24MP-4A (3-5)	3-9-95	1205	5
24MP-5A (3-5)	3-9-95	1630	5
24MP-6A (4-6)	3-9-95	1615	6
24MP-16 (4-6)	3-9-95	1615	1
24MP-17 (4-6)	3-10-95	0800	5
24MP-18 (4-6)	3-10-95	0900	5

HT:

DD:

Instructions:

Packed 118

MATRIX	ANALYSIS REQUESTED														EAL Sample No.				
	Water/Drinking/Discharge/Ground (circle)	Solid (circle)	Oil / Sludge (circle)	TCLP VC ABNA/Pest/Herb/Metals (circle)	VOC 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTX 8020/602 (circle) MTBE (circle)	TRPH 418, 1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)		Total Metals-DW / NPDES / SWB46 (circle & list metals below)	Dissolved Metals - DW / SWB46 (circle & list metals below)	Mic. 418 (circle & list metals below)	TOC
	X			X							X	X	X	X	X	X	X	X	X04133
	X			X							X	X	X	X	X	X	X	X	2004134
	X			X							X	X	X	X	X	X	X	X	75
	X			X							X	X	X	X	X	X	X	X	76
	X			X							X	X	X	X	X	X	X	X	77
	X			X							X	X	X	X	X	X	X	X	78
	X			X							X	X	X	X	X	X	X	X	79
	X			X							X	X	X	X	X	X	X	X	80
	X			X							X	X	X	X	X	X	X	X	81
	X			X							X	X	X	X	X	X	X	X	82

EAL Project # 0820
Custodian _____

Location 2, B2
Container Size _____

Date/Time (Received by Signature)

Date/Time (Received by Signature)

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Page 2 of 3

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 1700 Broadway Ste 900
CITY Denver STATE CO ZIP 80290
PHONE# 831-8100 FAX#

CLIENT CONTACT (print) WILLIAM MEIER
PROJECT I.D. 772450-21060
EAL QUOTE # PO.#

FAX RESULTS Y / N

TURNAROUND REQUIRED*

*expedited turnaround subject to additional fee

Sampler Name Kyle Cannon
(signature)
(print)

Evergreen Analytical Cooler No. 604
Cooler Received

Please PRINT

all information:

CLIENT SAMPLE IDENTIFICATION DATE SAMPLED TIME

75SS-1(3-5) 3-13-95 0330
75SS-1(7-9) 3-13-95 1000
75SS-2(3-5) 3-13-95 1215
75SS-2(9-11) 3-13-95 1245

trip blank

MATRIX		ANALYSIS REQUESTED																	EAL Sample No.	Location	Container Size																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
No. of Containers	Water-Drinking/Discharge/Ground (circle)	Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TPH 418.1/Oil & Grease 413.1 (circle)	TPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Mercury (circle & list metals below)	TOC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

EAL Project # 0820
Custodian

Location
Container Size

HT:
DD:

Instructions:

Packed in ice

Received by (Signature) Kyle Cannon Date/Time 3/13/95 1500 Relinquished by (Signature) W. Meier Date/Time 3/13/95 1500

•



Y

5

y

N

N/A

Y

N
for

N/A

1000

Year	Percentage of population aged 65 and over
1950	7
1960	8
1970	9
1980	10
1990	11
2000	12
2010	13
2020	14
2030	15
2040	16
2050	16

10

: _____

pples

amples

Y .

Figure 1

Custodian Signature/Date:

Custodian Signature/Date:

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.

COMPANY Engineering Science
ADDRESS 1700 Broadway St 700
CITY Denver STATE CO ZIP 80202
PHONE# 331-8100 FAX#

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

CLIENT CONTACT (print) Elizabeth Miller

PROJECT I.D. 422450.27020

EAL QUOTE # _____ PO.# _____

TURNAROUND REQUIRED* _____

*expedited turnaround subject to additional fee

Sampler Name: Kyle Cunniff
(signature)
(print) Kyle Cunniff

Evergreen Analytical Cooler No. 604
Cooler Received _____

Please **PRINT**

all information:

CLIENT SAMPLE IDENTIFICATION DATE SAMPLED TIME

24MP-1A (3'-4')	3-8-95	1100
24MP-1B (8'-9')	3-8-95	1200
24MP-2 (3'-4')	3-8-95	1600
24MP-3 (3'-5')	3-9-95	0900
24MP-4 (3'-5')	3-9-95	1200
24MP-5 (3'-5')	3-9-95	1630
24MP-6 (4'-6')	3-9-95	1615
24MP-16 (4'-6')	3-9-95	1615
24MP-17 (4'-6')	3-10-95	0800
24MP-18 (4'-6')	3-10-95	0900

HT:

DD:

MATRIX	ANALYSIS REQUESTED																			EAL use only Do not write in shaded area																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	Water-Drinking/Discharge/Ground (circle)	Soil Solid (circle)	Oil / Sludge	TCLP VC A/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)	TPH 418.1/Oil & Grease 413.1 (circle)	TPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Moisture																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

Instructions: Moisture container not used for sample 24MP-1B (8'-9') black 3/14/95
packed in ice

Relinquished by (Signature) [Signature] Date/Time 3/14/95 11:00
Received by (Signature) [Signature] Date/Time 3/14/95 11:00
Relinquished by (Signature) [Signature] Date/Time 3/15/95 1300
Received by (Signature) [Signature] Date/Time 3/15/95 11:00

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-1A(3'-4')	Client Project No.	: 722450.21020
Lab Sample Number	: X04173	MacDill	
Date Sampled	: 3/8/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 5.00
Date Extracted/Prepared	: 3/18/95	Method	: 8020
Date Analyzed	: 3/18/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031811
		Method Blank No.	: MB031895

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	14 J	22
Toluene	108-88-3	63	22
Ethyl Benzene	100-41-4	23	22
Total Xylene	1330-20-7	160	22
Chlorobenzene	108-90-7	U	22
1,3,5-trimethylbenzene	108-67-8	37	22
1,2,4-trimethylbenzene	95-63-6	59	22
1,2,3-trimethylbenzene	526-73-8	40	22
1,2,3,4-tetramethylbenzene	488-23-3	20	22

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 88%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

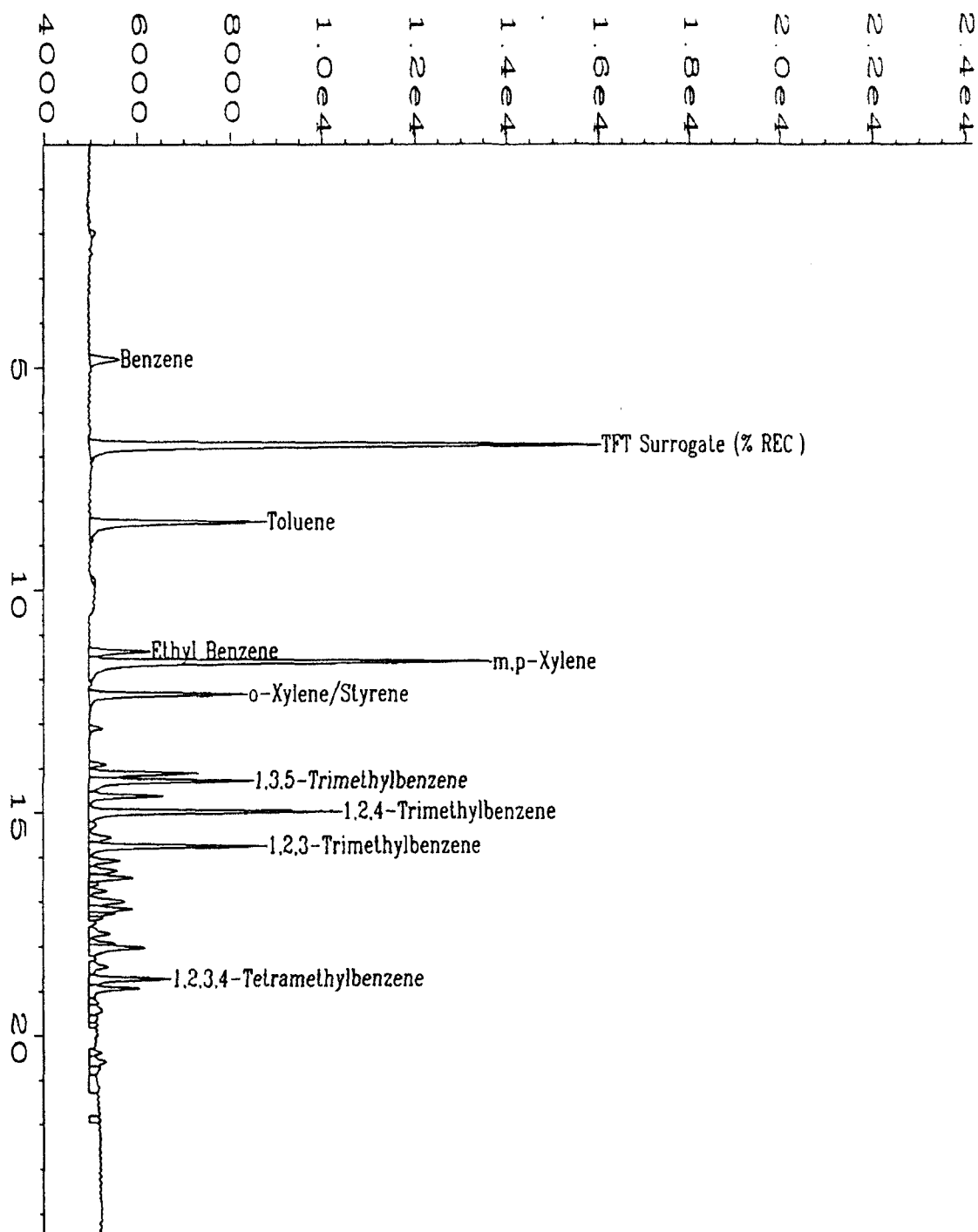
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20318\011R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04173 DF=5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX2031
Acquired on	: 18 Mar 95 11:24 PM	Analysis Method	: BX20318.MT
Report Created on	: 19 Mar 95 01:34 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 5		
Sample Info	: Project#: 95-0820 Client#: 24MP-1A(3'-4') Soil		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-1B(8-9')	Client Project No.	: 722450.21020
Lab Sample Number	: X04174	MacDill	
Date Sampled	: 3/8/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/18/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031722
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	17	4.8
Toluene	108-88-3	14	4.8
Ethyl Benzene	100-41-4	12	4.8
Total Xylene	1330-20-7	16	4.8
Chlorobenzene	108-90-7	1.2 J	4.8
1,3,5-trimethylbenzene	108-67-8	5.9	4.8
1,2,4-trimethylbenzene	95-63-6	6.4	4.8
1,2,3-trimethylbenzene	526-73-8	3.4 J	4.8
1,2,3,4-tetramethylbenzene	488-23-3	38	4.8

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 82%
QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

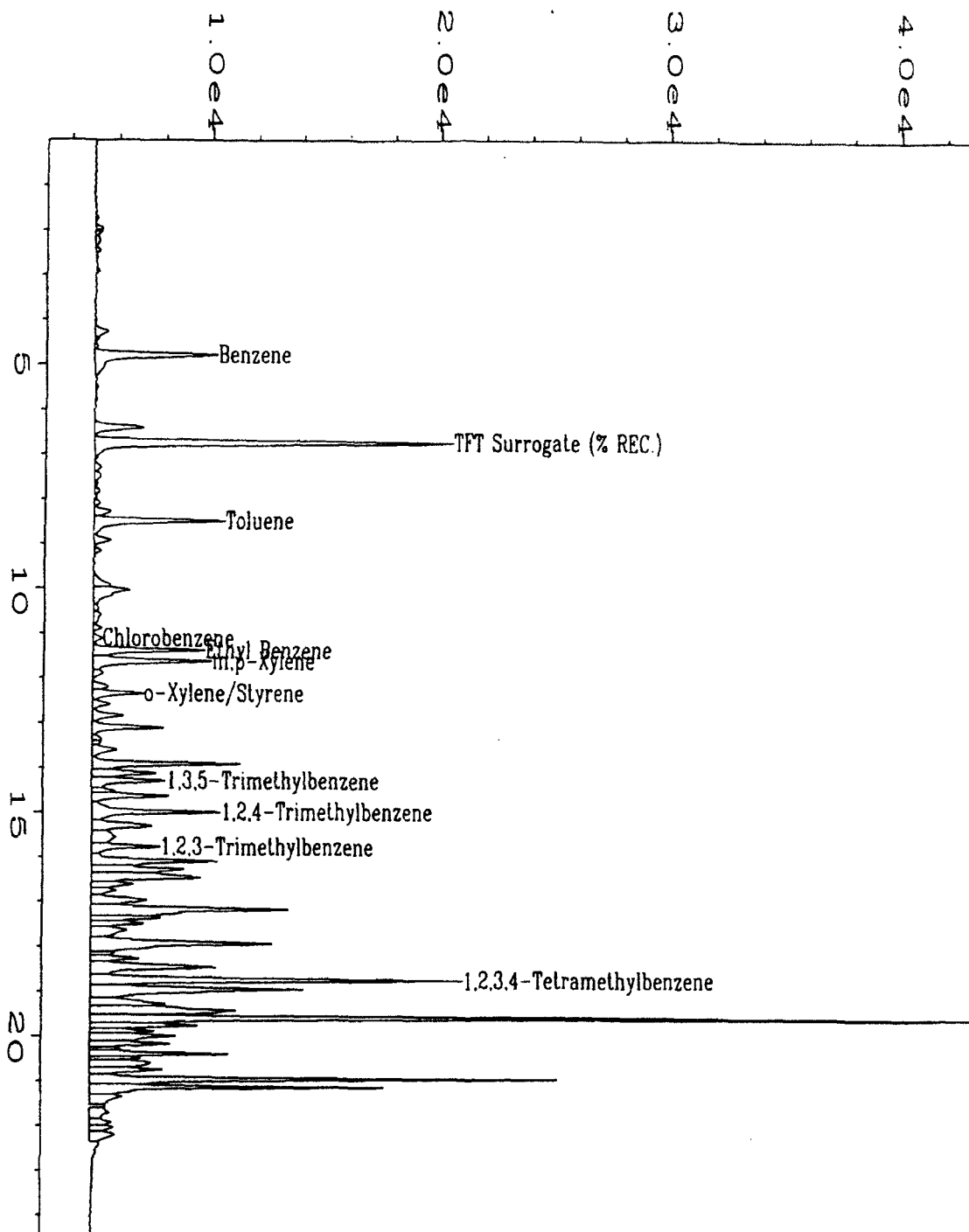
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available

Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20317\022R0801.D

Operator : C.J. Cook

Instrument : BTEX2

Sample Name : X04174 DF=1

Run Time Bar Code:

Acquired on : 18 Mar 95 02:51 AM

Report Created on: 18 Mar 95 02:33 PM

Last Recalib on : 18 MAR 95 01:39 PM

Multiplier : 1

Page Number : 1

Vial Number : 22

Injection Number : 1

Sequence Line : 8

Instrument Method: BX203.1.MT

Analysis Method : BX20317.MT

Sample Amount : 0

ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-18(8-9')	Client Project No.	: 722450.21020
Lab Sample Number	: X04174DUP	MacDill	
Date Sampled	: 3/8/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/18/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031723
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	12	4.8
Toluene	108-88-3	12	4.8
Ethyl Benzene	100-41-4	11	4.8
Total Xylene	1330-20-7	16	4.8
Chlorobenzene	108-90-7	1.4 J	4.8
1,3,5-trimethylbenzene	108-67-8	6.1	4.8
1,2,4-trimethylbenzene	95-63-6	6.7	4.8
1,2,3-trimethylbenzene	526-73-8	3.6 J	4.8
1,2,3,4-tetramethylbenzene	488-23-3	37	4.8

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 82%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

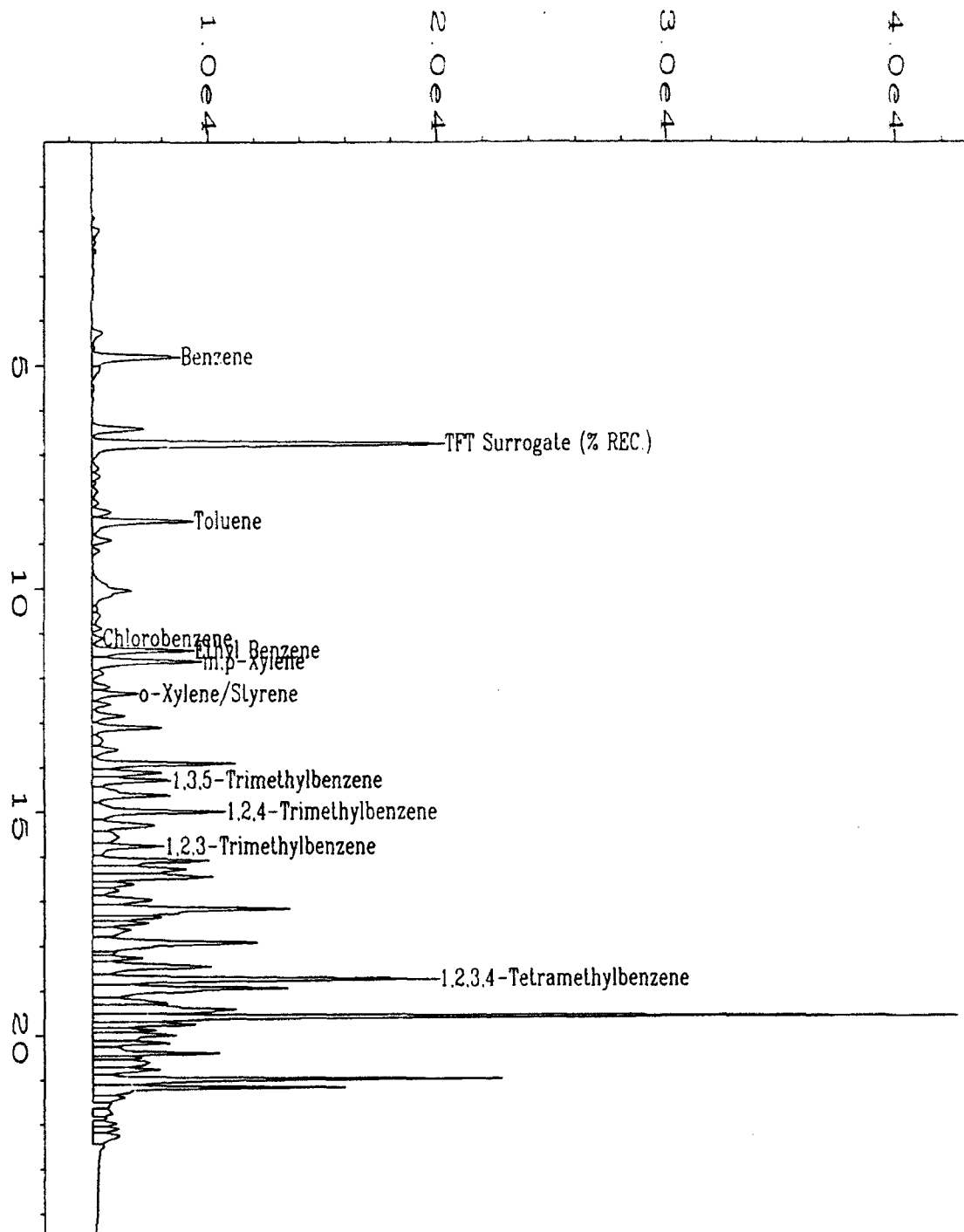
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20317\023R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 23
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04174DUP DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX2031 T
Acquired on	: 18 Mar 95 03:35 AM	Analysis Method	: BX20317.MT
Report Created on	: 18 Mar 95 02:34 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 01:39 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-2(3'-4')	Client Project No.	: 722450.21020
Lab Sample Number	: X04175		MacDill
Date Sampled	: 3/8/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 5.00
Date Extracted/Prepared	: 3/18/95	Method	: 8020
Date Analyzed	: 3/19/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031812
		Method Blank No.	: MB031895

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	24
Toluene	108-88-3	U	24
Ethyl Benzene	100-41-4	U	24
Total Xylene	1330-20-7	13 J	24
Chlorobenzene	108-90-7	4.2 J	24
1,3,5-trimethylbenzene	108-67-8	9.5 J	24
1,2,4-trimethylbenzene	95-63-6	6.0 J	24
1,2,3-trimethylbenzene	526-73-8	U	24
1,2,3,4-tetramethylbenzene	488-23-3	11 J	24

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 96%
QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

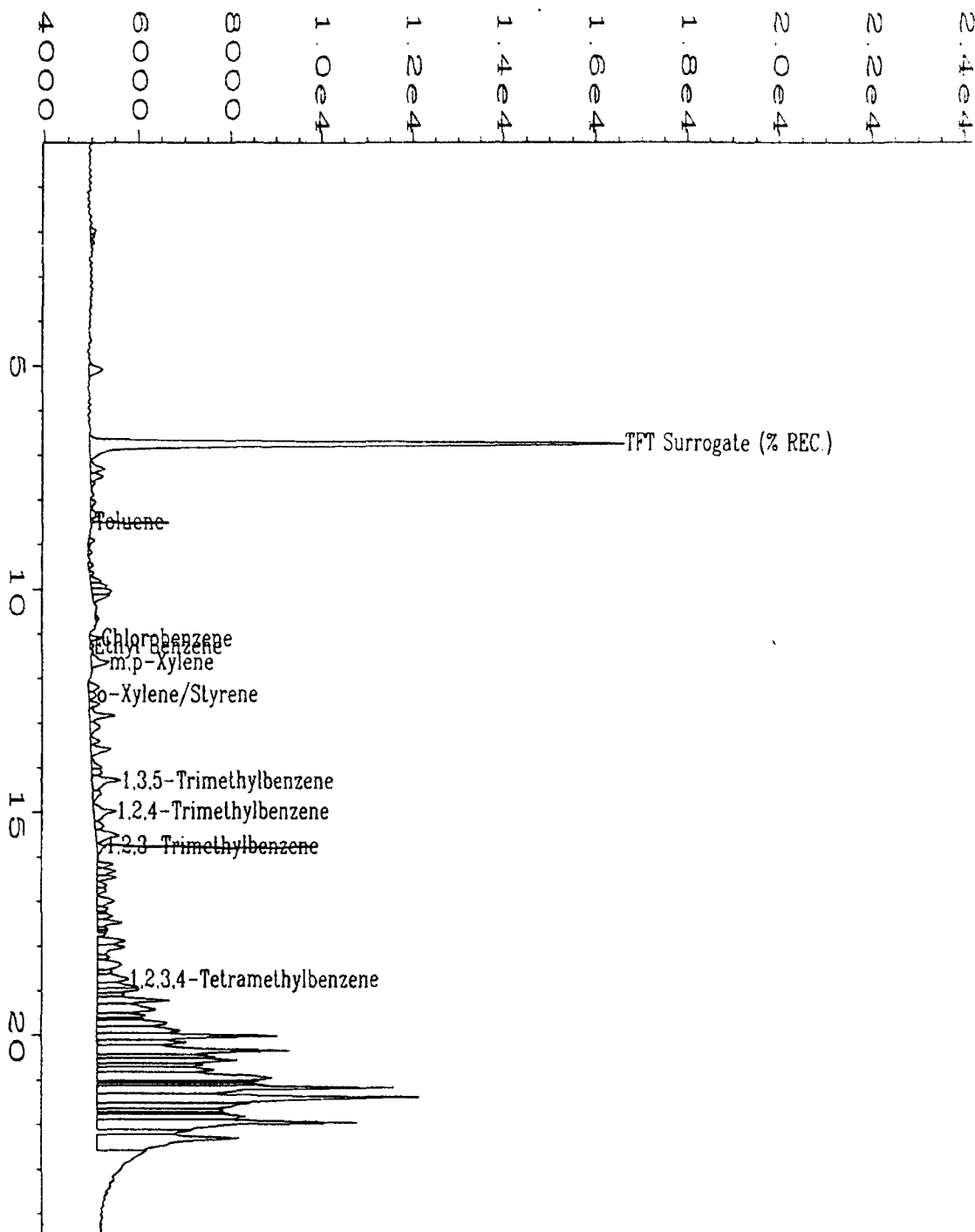
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20318\012R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04175 DF=5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20318.MTH
Acquired on	: 19 Mar 95 00:09 AM	Analysis Method	: BX20318.MTH
Report Created on:	: 19 Mar 95 01:34 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 5	Sample Info	: Project#: 95-0820 Client#: 24MP-2 (3'-4') Soil

pm 4/11/95

pm 4/13/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-3(3-5)	Client Project No.	: 722450.21020
Lab Sample Number	: X04176	MacDill	
Date Sampled	: 3/9/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/18/95	Method	: 8020
Date Analyzed	: 3/19/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031813
		Method Blank No.	: MB031895

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.7
Toluene	108-88-3	1.1 J	4.7
Ethyl Benzene	100-41-4	U	4.7
Total Xylene	1330-20-7	2.2 J	4.7
Chlorobenzene	108-90-7	U	4.7
1,3,5-trimethylbenzene	108-67-8	U	4.7
1,2,4-trimethylbenzene	95-63-6	U	4.7
1,2,3-trimethylbenzene	526-73-8	U	4.7
1,2,3,4-tetramethylbenzene	488-23-3	U	4.7

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 81%
QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

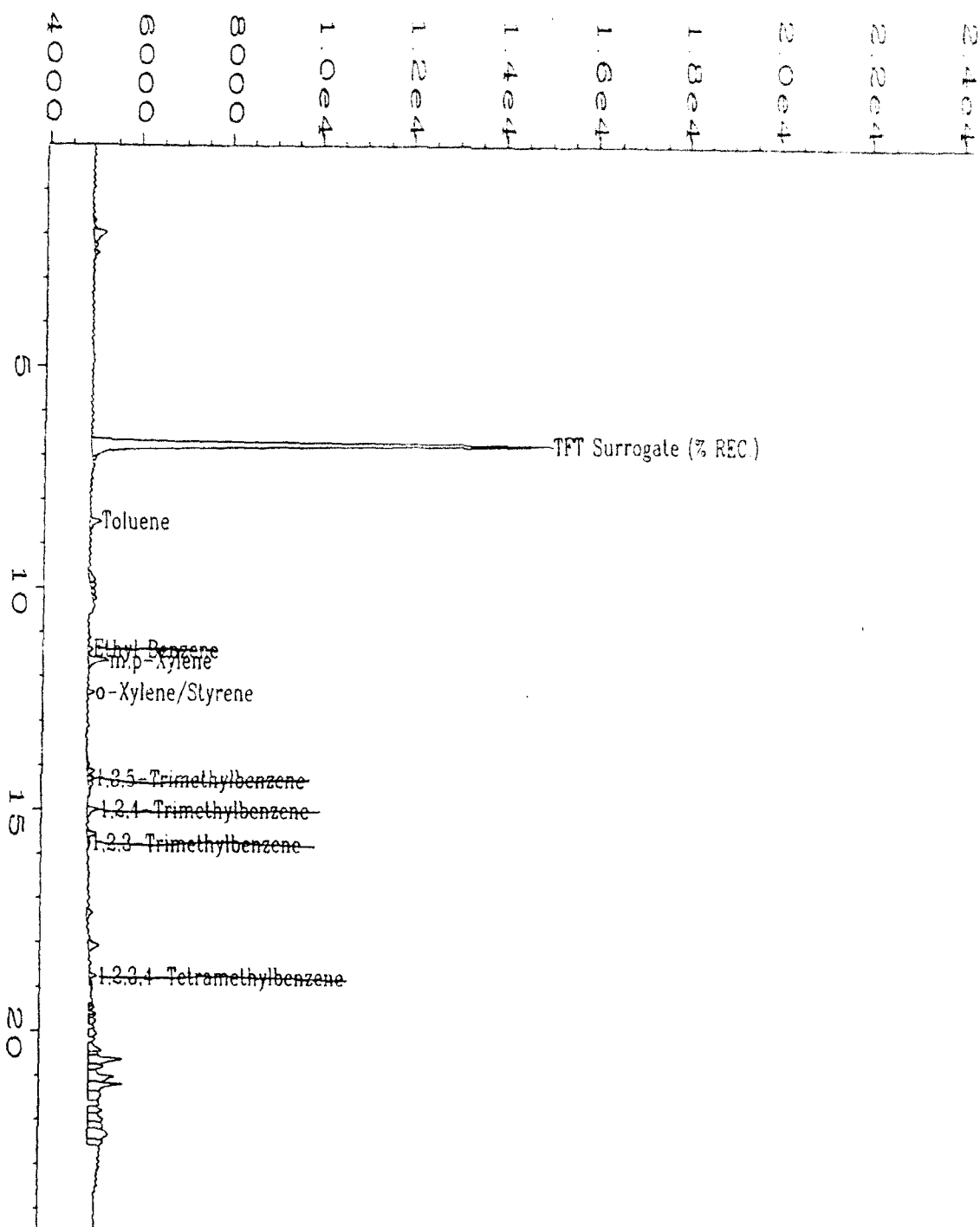
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20318\013R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04176 DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20318.MT
Acquired on	: 19 Mar 95 00:53 AM	Analysis Method	: BX20318.MT
Report Created on:	19 Mar 95 01:35 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0820 Client#: 24MP-3(3-5) Soil		

On 4/11/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-4(3-5)	Client Project No.	: 722450.21020
Lab Sample Number	: X04177	MacDill	
Date Sampled	: 3/9/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/18/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031726
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.7
Toluene	108-88-3	0.5 J	4.7
Ethyl Benzene	100-41-4	U	4.7
Total Xylene	1330-20-7	1.1 J	4.7
Chlorobenzene	108-90-7	U	4.7
1,3,5-trimethylbenzene	108-67-8	U	4.7
1,2,4-trimethylbenzene	95-63-6	U	4.7
1,2,3-trimethylbenzene	526-73-8	U	4.7
1,2,3,4-tetramethylbenzene	488-23-3	U	4.7

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 64%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

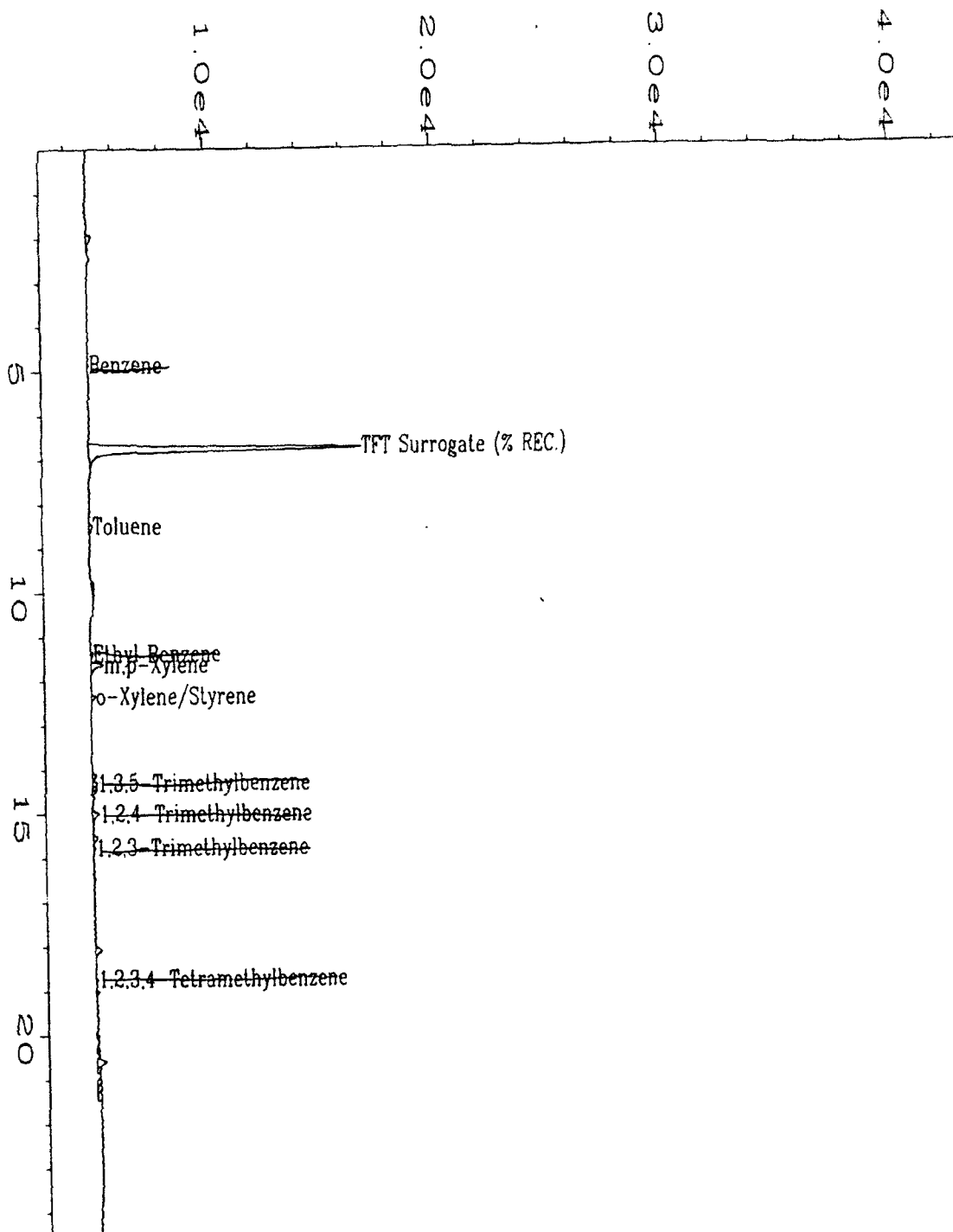
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20317\026R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 26
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04177 DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX203.M
Acquired on	: 18 Mar 95 05:45 AM	Analysis Method	: BX2031.M
Report Created on:	18 Mar 95 02:36 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 01:39 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/1/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-5(3-5)	Client Project No.	: 722450.21020
Lab Sample Number	: X04178		MacDill
Date Sampled	: 3/9/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/18/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031727
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.8
Toluene	108-88-3	2.3 J	4.8
Ethyl Benzene	100-41-4	U	4.8
Total Xylene	1330-20-7	U	4.8
Chlorobenzene	108-90-7	U	4.8
1,3,5-trimethylbenzene	108-67-8	U	4.8
1,2,4-trimethylbenzene	95-63-6	U	4.8
1,2,3-trimethylbenzene	526-73-8	U	4.8
1,2,3,4-tetramethylbenzene	488-23-3	U	4.8

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 74%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value


U = Compound analyzed for, but not detected.

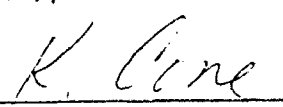
B = Compound found in blank and sample. Compare blank and sample data.

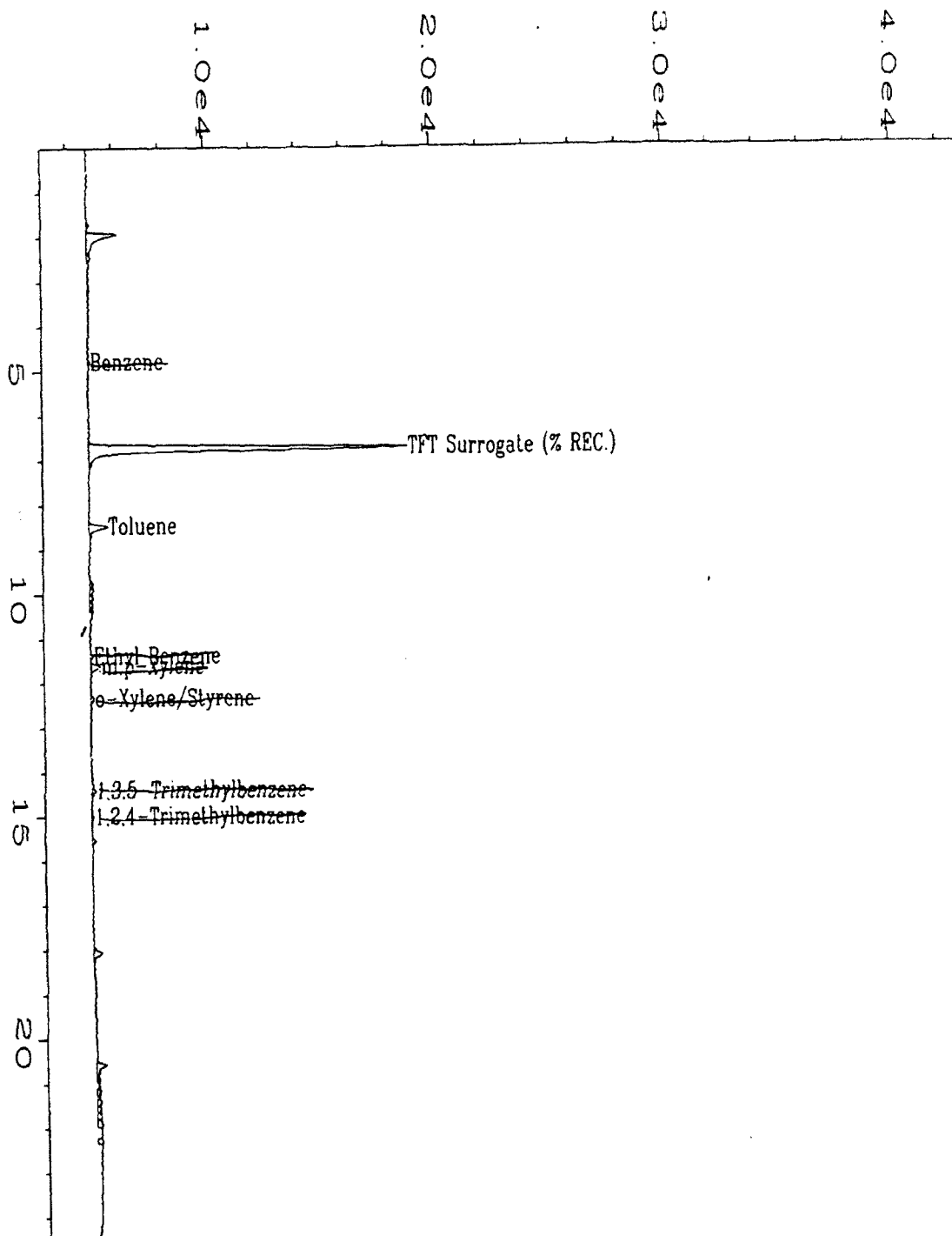
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20317\027R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 27
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04178 DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20317 T
Acquired on	: 18 Mar 95 06:29 AM	Analysis Method	: BX2031. F
Report Created on:	18 Mar 95 02:36 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 01:39 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/11/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-6(4-6)	Client Project No.	: 722450.21020
Lab Sample Number	: X04179	MacDill	
Date Sampled	: 3/9/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/18/95	Method	: 8020
Date Analyzed	: 3/19/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031815
		Method Blank No.	: M8031895

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.9
Toluene	108-88-3	0.8 J	4.9
Ethyl Benzene	100-41-4	U	4.9
Total Xylene	1330-20-7	U	4.9
Chlorobenzene	108-90-7	U	4.9
1,3,5-trimethylbenzene	108-67-8	U	4.9
1,2,4-trimethylbenzene	95-63-6	U	4.9
1,2,3-trimethylbenzene	526-73-8	U	4.9
1,2,3,4-tetramethylbenzene	488-23-3	U	4.9

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 96%
QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

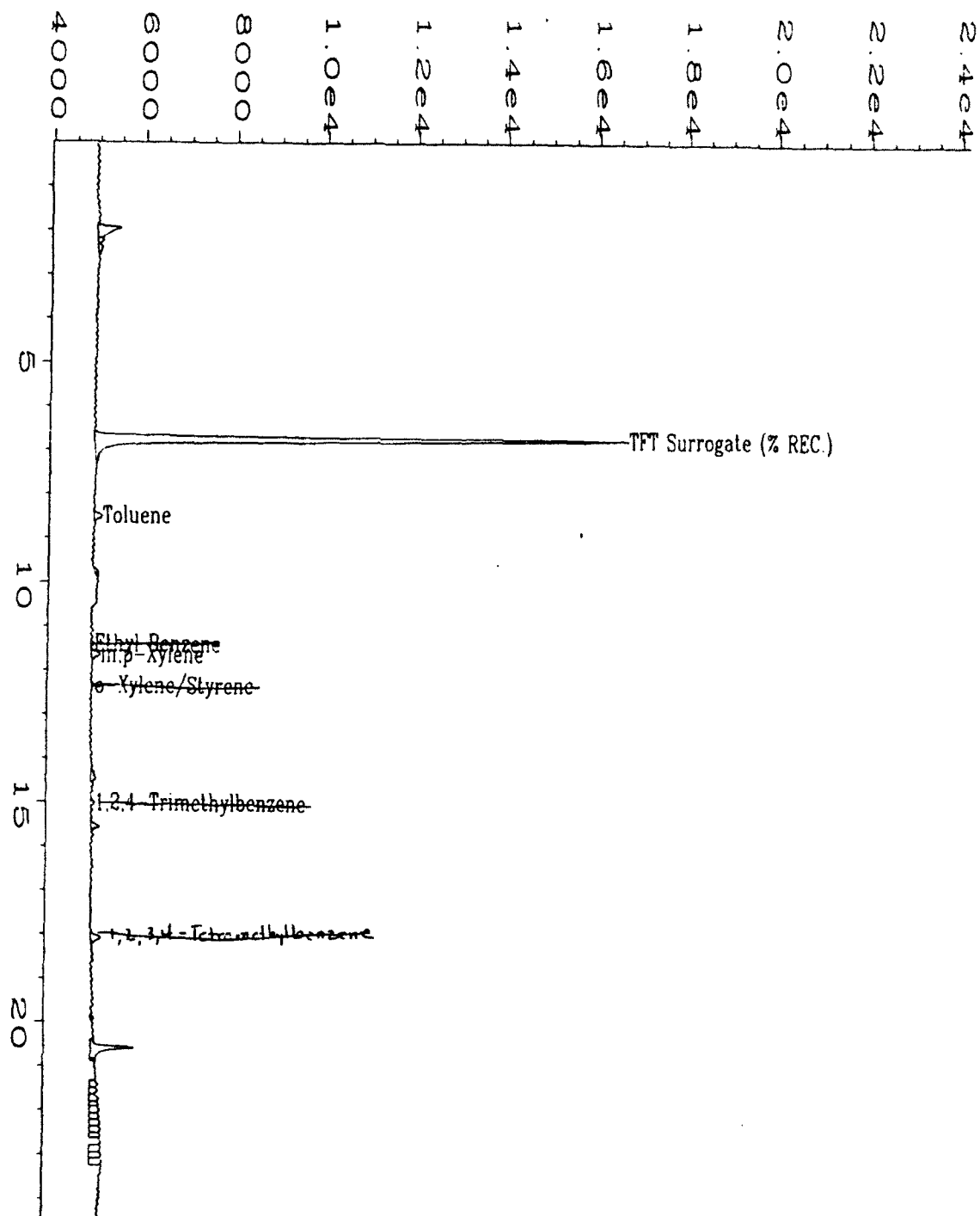
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20318\015R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04179 DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX203 MT
Acquired on	: 19 Mar 95 02:23 AM	Analysis Method	: BX20318.MT
Report Created on:	: 19 Mar 95 01:35 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0820 Client#: 24MP-6(4-6) Soil		

pm 4/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24SS-1(4-6)	Client Project No.	: 722450.21020
Lab Sample Number	: X04181	MacDill	
Date Sampled	: 3/10/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/18/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031729
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration*	PQL*
		ug/kg	ug/kg
Benzene	71-43-2	U	4.8
Toluene	108-88-3	2.9 J	4.8
Ethyl Benzene	100-41-4	U	4.8
Total Xylene	1330-20-7	2.6 J	4.8
Chlorobenzene	108-90-7	U	4.8
1,3,5-trimethylbenzene	108-67-8	0.5 J	4.8
1,2,4-trimethylbenzene	95-63-6	U	4.8
1,2,3-trimethylbenzene	526-73-8	U	4.8
1,2,3,4-tetramethylbenzene	488-23-3	42	4.8

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 76%
QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

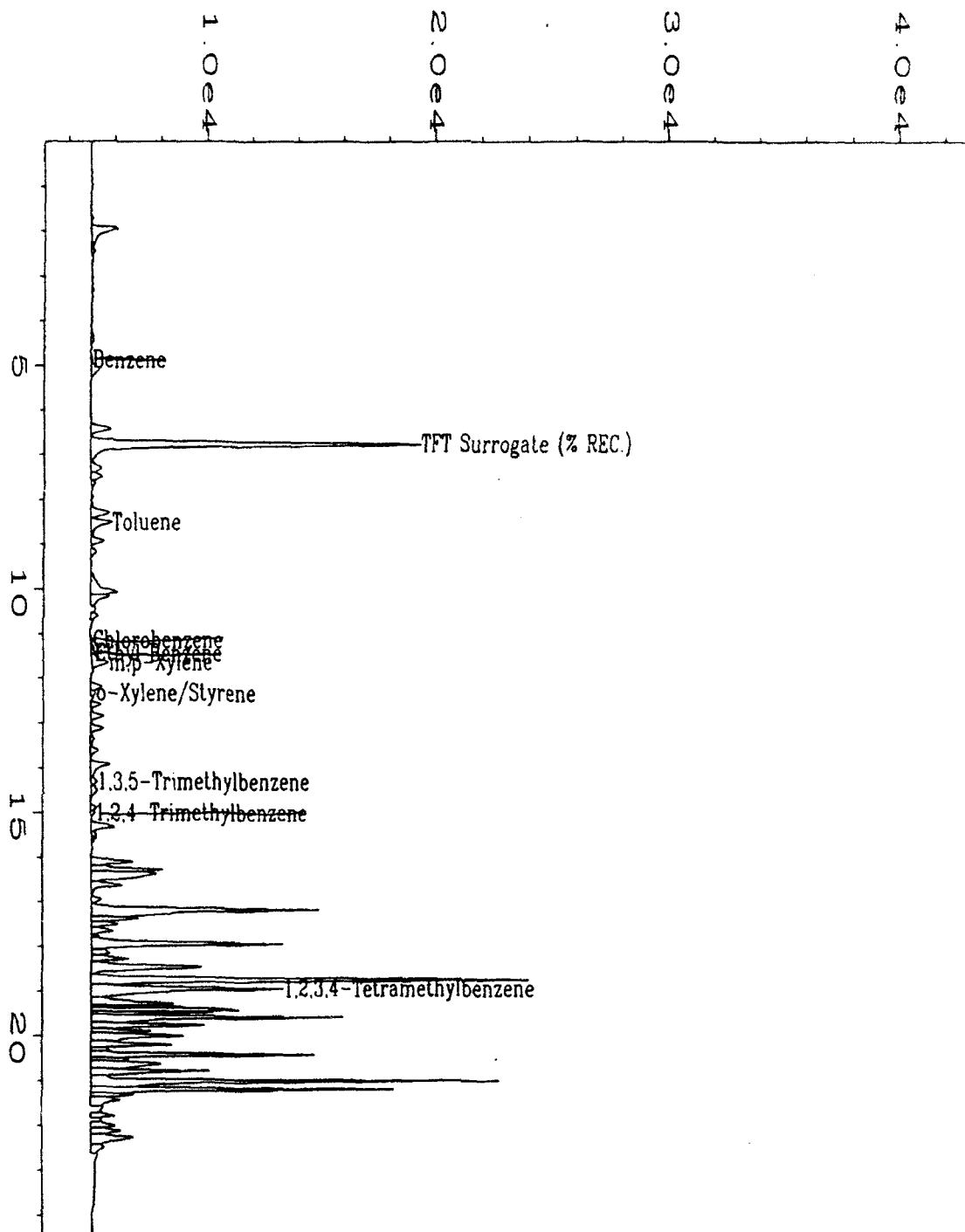
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20317\029R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 29
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04181 DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX203.M
Acquired on	: 18 Mar 95 07:56 AM	Analysis Method	: BX203.M
Report Created on:	18 Mar 95 02:37 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 01:39 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/11/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24SS-2(4-6)	Client Project No.	: 722450.21020
Lab Sample Number	: X04182		MacDill
Date Sampled	: 3/10/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 5.00
Date Extracted/Prepared	: 3/18/95	Method	: 8020
Date Analyzed	: 3/19/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031820
		Method Blank No.	: MB031895

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	23
Toluene	108-88-3	12 J	23
Ethyl Benzene	100-41-4	37	23
Total Xylene	1330-20-7	170	23
Chlorobenzene	108-90-7	27	23
1,3,5-trimethylbenzene	108-67-8	150	23
1,2,4-trimethylbenzene	95-63-6	140	23
1,2,3-trimethylbenzene	526-73-8	200	23
1,2,3,4-tetramethylbenzene	488-23-3	850 E	23

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample results & PQLs are reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 91%
QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

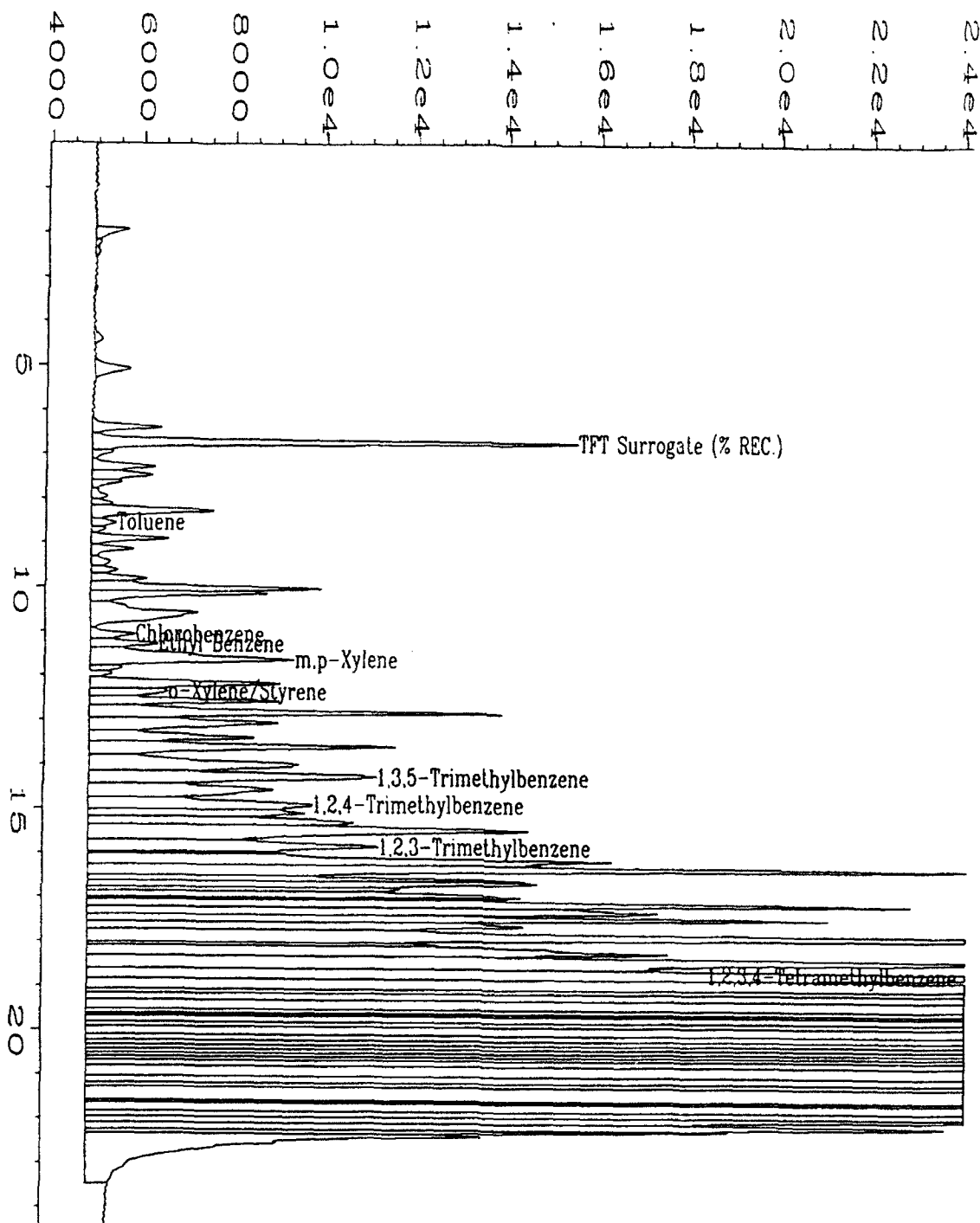
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20318\020R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04182 DF=5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20318.MTH
Acquired on	: 19 Mar 95 06:04 AM	Analysis Method	: BX20318.MTH
Report Created on:	: 19 Mar 95 01:37 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 5		
Sample Info	: Project#: 95-0820 Client#: 24SS-2(4-6) Soil		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24 MP-1A(3'-4')	Client Project No.	: 722450.21020/MAC DI
Lab Sample No.	: X04173	Lab Project No.	: 95-0820
Date Sampled	: 3/8/95	EPA Method No.	: 5030/8015 Mod
Date Received	: 3/14/95	Matrix	: Water
Date Prepared	: 3/16/95,3/17/95	Method Blank	: MBO31695
Date Analyzed	: 3/16/95,3/17/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	5.00	0.00	6.51	130	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	5.00	6.01	120	8.0	50	60-140

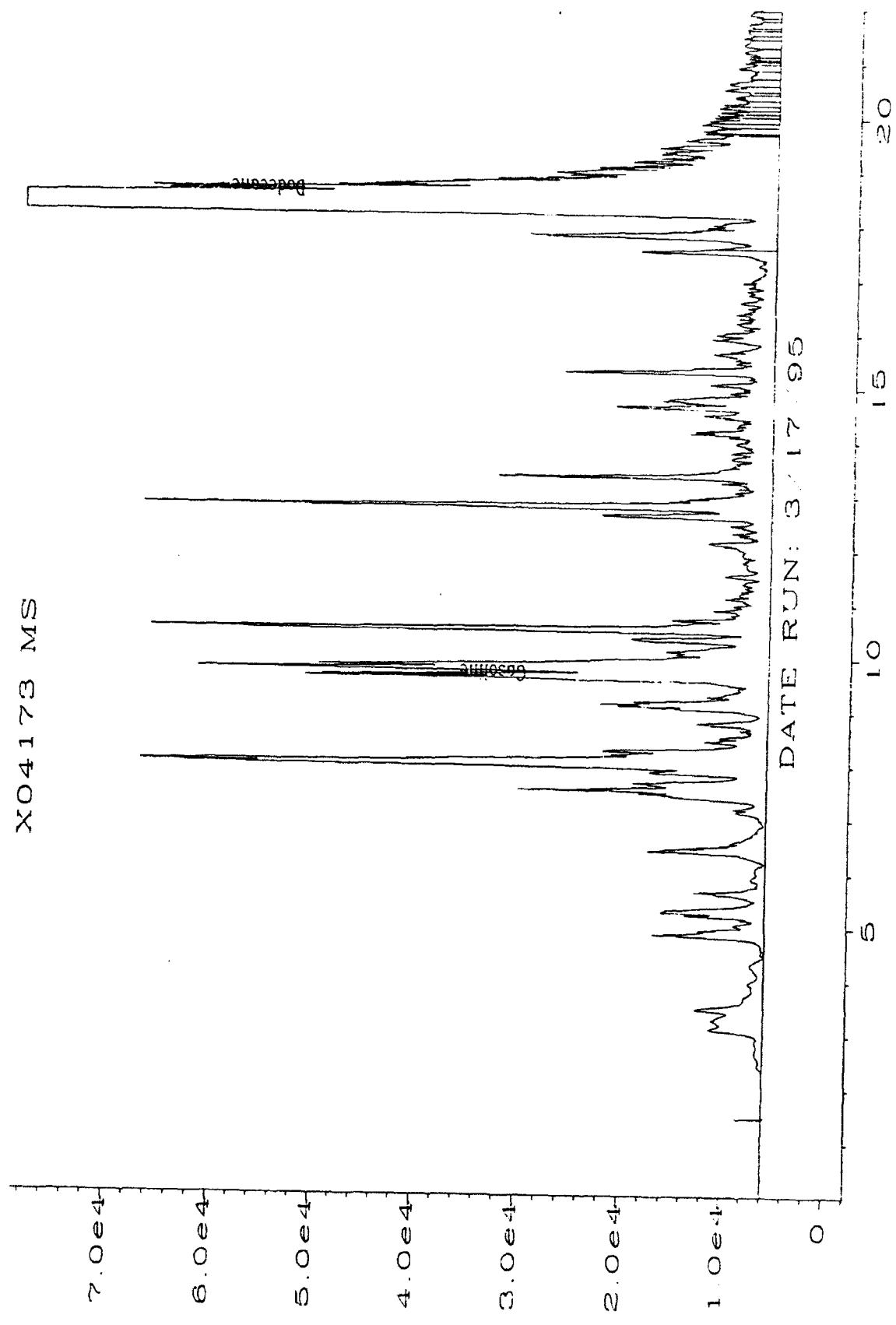
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

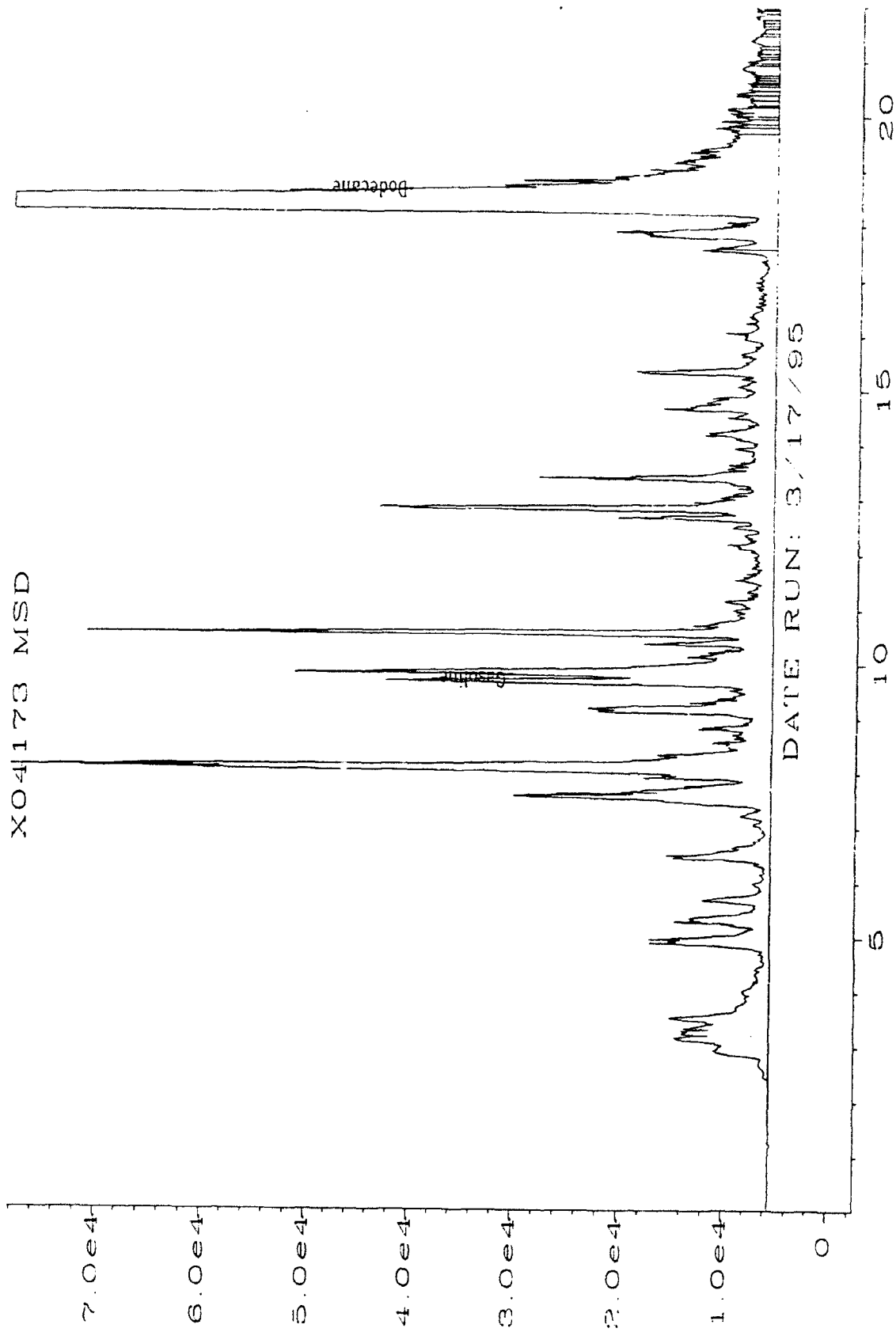
Spike Recovery: 0 out of (2) outside limits.

Comments: NA = Not analyzed/not applicable.

X04173 MS



Sig. 1 in C:\HPCHEM\N\DATA\TVH0316 033F0101.D



Sig. 1 in C:\NHP\CHEM\1\DATA\TANV\H0316\N035\F0101.D

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS
TEH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No. : 24MP-7(2-4) Client Project No. : 722450.21020/MAC L
Lab Sample No. : X04163 Lab Project No. : 95-0819
Date Sampled : 3/10/95 EPA Method No. : 3500/MOD.8015
Date Received : 3/14/95 Matrix : SOIL
Date Prepared : 3/17/95 Method Blank : SB031795
Date Analyzed : 3/18/95

Compound	Spike Added (ug/mL)	Sample Concentration (ug/mL)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Jet Fuel	1000	0	910	91	60-140

Compound	Spike Added (ug/mL)	MSD Concentration (ug/mL)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Jet Fuel	1000	930	93	2.2	50	60-140

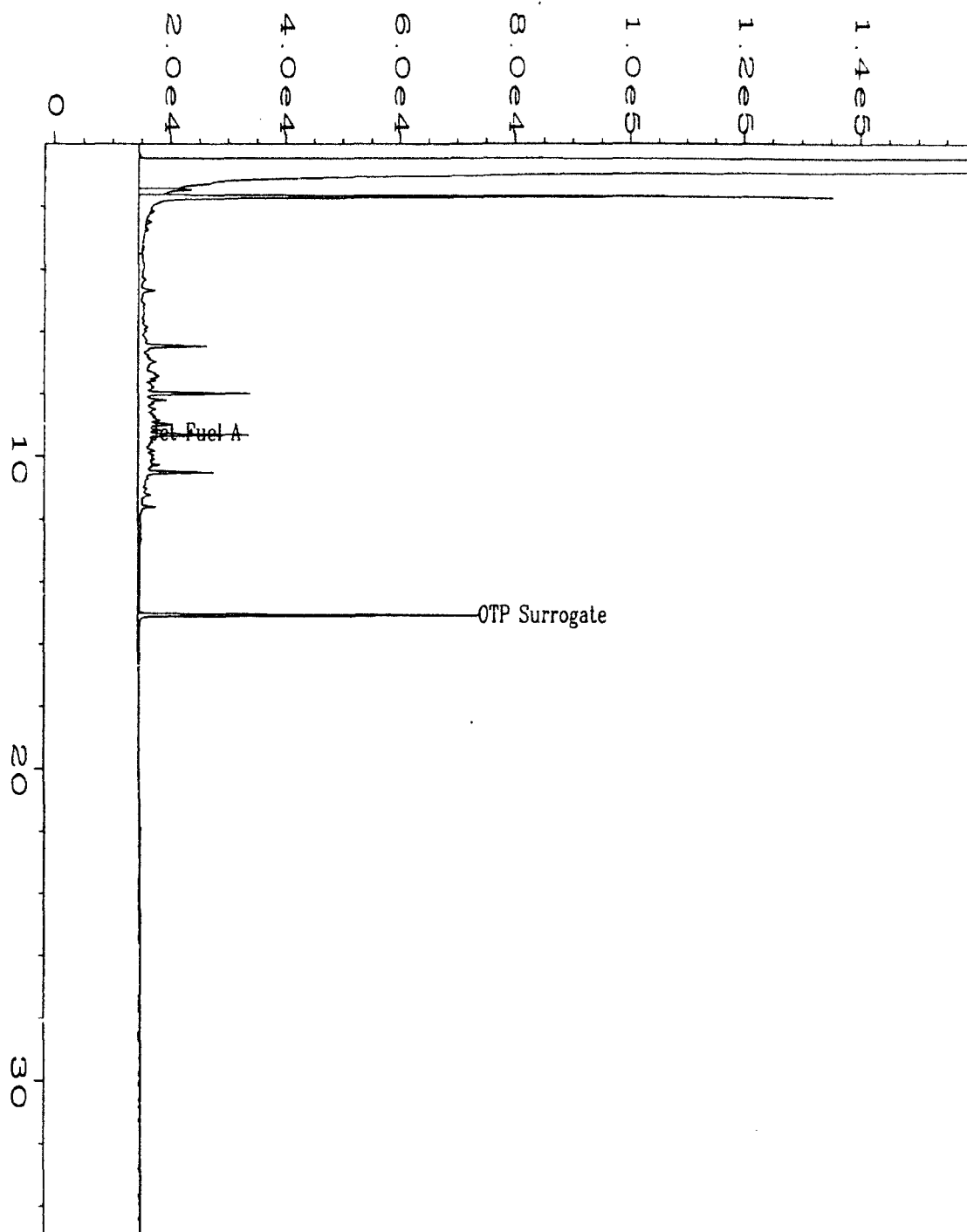
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

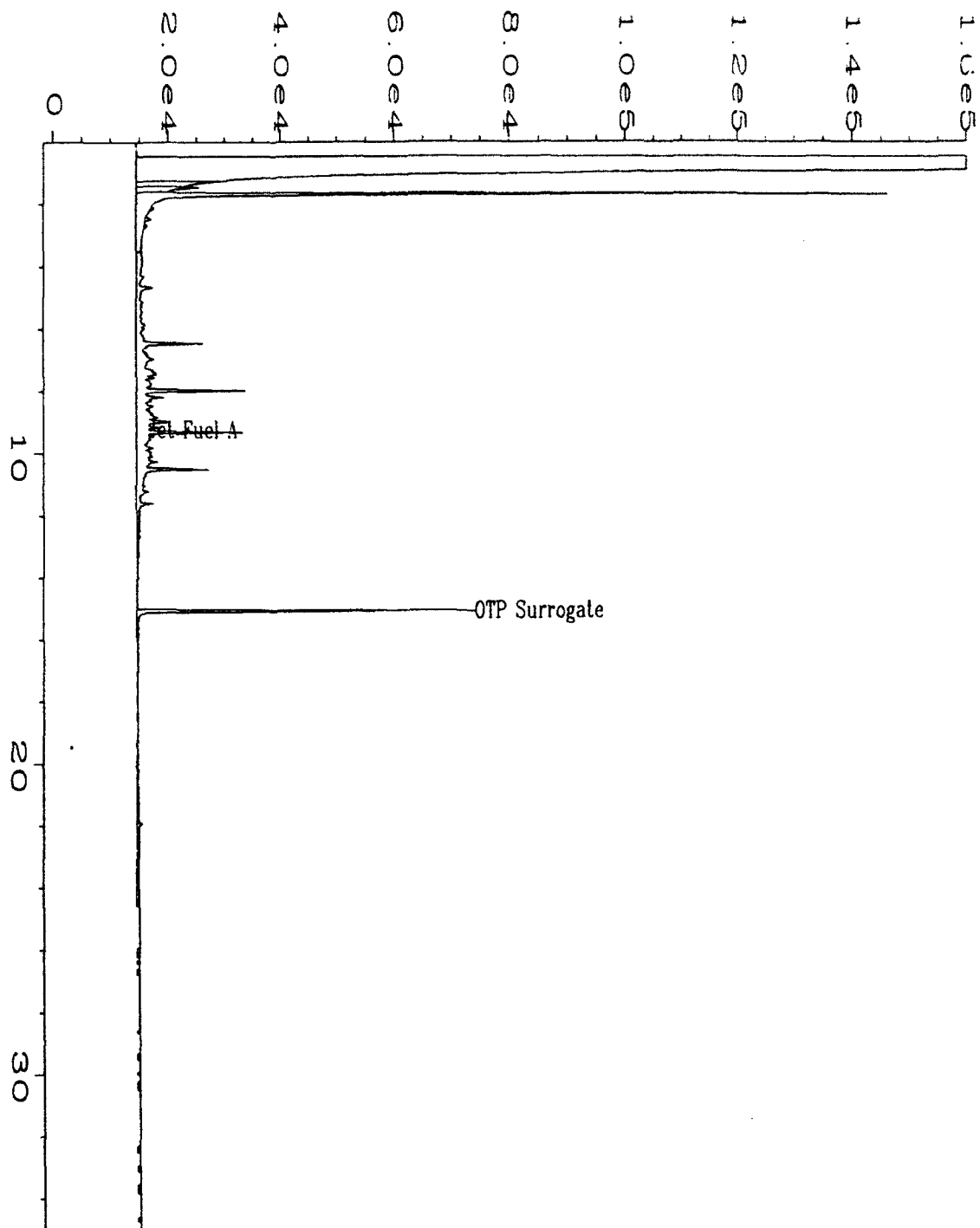
Spike Recovery: 0 out of (1) outside limits.

Comments: NA = Not analyzed/not applicable.

Values reported in ug/mL in the liquid extract.



Data File Name	: C:\HPCHEM\2\DATA\TEH0317\043R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 43
Instrument	: TEH	Injection Number	: 1
Sample Name	: X04163 MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 19 Mar 95 00:04 AM	Analysis Method	: JET0317.MTH
Report Created on	: 11 Apr 95 12:24 PM	Sample Amount	: 0
Last Recalib on	: 21 MAR 95 09:48 AM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\2\DATA\TEH0317\042R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 42
Instrument	: TEH	Injection Number	: 1
Sample Name	: X01463 MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BAS2.M
Acquired on	: 18 Mar 95 11:14 PM	Analysis Method	: JET0317.MT
Report Created on:	11 Apr 95 12:24 PM	Sample Amount	: 0
Last Recalib on	: 21 MAR 95 09:48 AM	ISTD Amount	:
Multiplier	: 1		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Water Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24MP-6(4-6)	Client Project No.	: 722450.21020
Lab Sample No.	: X04179	MacDill	
Date Sampled	: 3/9/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	EPA Method No.	: 8020
Date Prepared	: 3/18/95	Matrix	: Soil
Date Analyzed	: 3/19/95	Lab File Number(s)	: BX2031816
		Method Blank	: MB031895

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	0.0	15	74	65-121
Toluene	20.0	0.8	15	69	69-117
Ethyl Benzene	20.0	0.0	14	71	68-118
m,p-Xylene	40.0	0.0	29	72	66-116
o-Xylene	20.0	0.0	14	70	73-117
Chlorobenzene	20.0	0.0	14	70	65-121
1,3,5-TMB	20.0	0.0	13	63*	65-121
1,2,4-TMB	20.0	0.0	12	60*	65-121
1,2,3-TMB	20.0	0.0	11	54*	65-121
1,2,3,4-TeMB	20.0	0.0	7.5	38*	65-121

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20.0	NA	NA	NA	17.4	65-121
Toluene	20.0	NA	NA	NA	15.8	69-117
Ethyl Benzene	20.0	NA	NA	NA	11.9	68-118
m,p-Xylene	40.0	NA	NA	NA	15.4	66-116
o-Xylene	20.0	NA	NA	NA	13.2	73-117
Chlorobenzene	20.0	NA	NA	NA	17.4	65-121
1,3,5-TMB	20.0	NA	NA	NA	17.4	65-121
1,2,4-TMB	20.0	NA	NA	NA	17.4	65-121
1,2,3-TMB	20.0	NA	NA	NA	17.4	65-121
1,2,3,4-TeMB	20.0	NA	NA	NA	17.4	65-121

* = Values outside of QC limits. see LCS 031895.

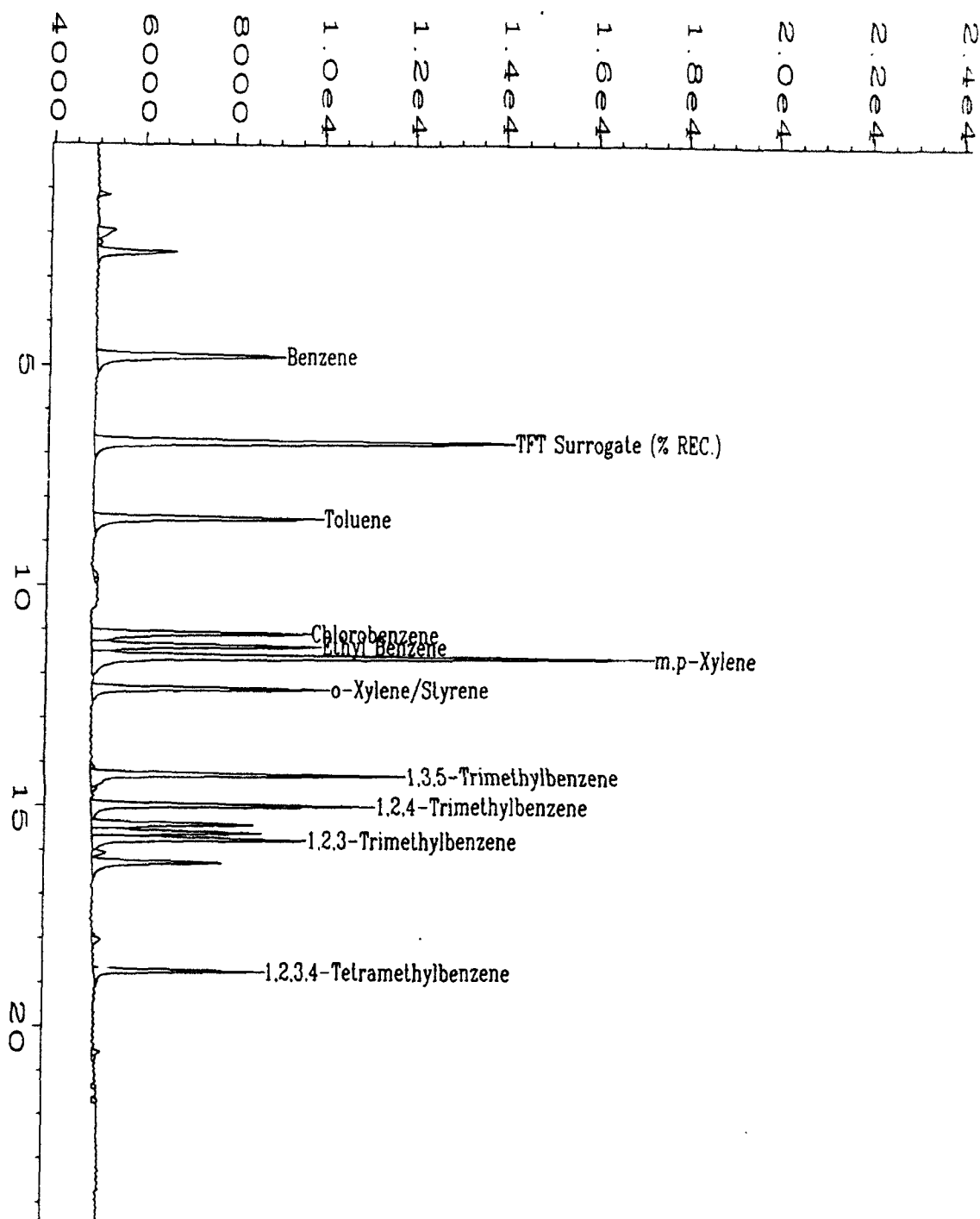
RPD: NA out of (10) outside limits.

Spike Recovery: 4 out of (10) outside limits.

Comments: MSD on this sample did not purge.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20318\016R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04179MS DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20318.FI
Acquired on	: 19 Mar 95 03:07 AM	Analysis Method	: BX20318.MT
Report Created on:	19 Mar 95 01:36 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0820 Client#: 24MP-6(4-6) Soil		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.21020
Lab Sample Number	: X04187	MacDill	
Date Sampled	: 3/8/95	Lab Project No.	: 95-0820
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/18/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2031720
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 74%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

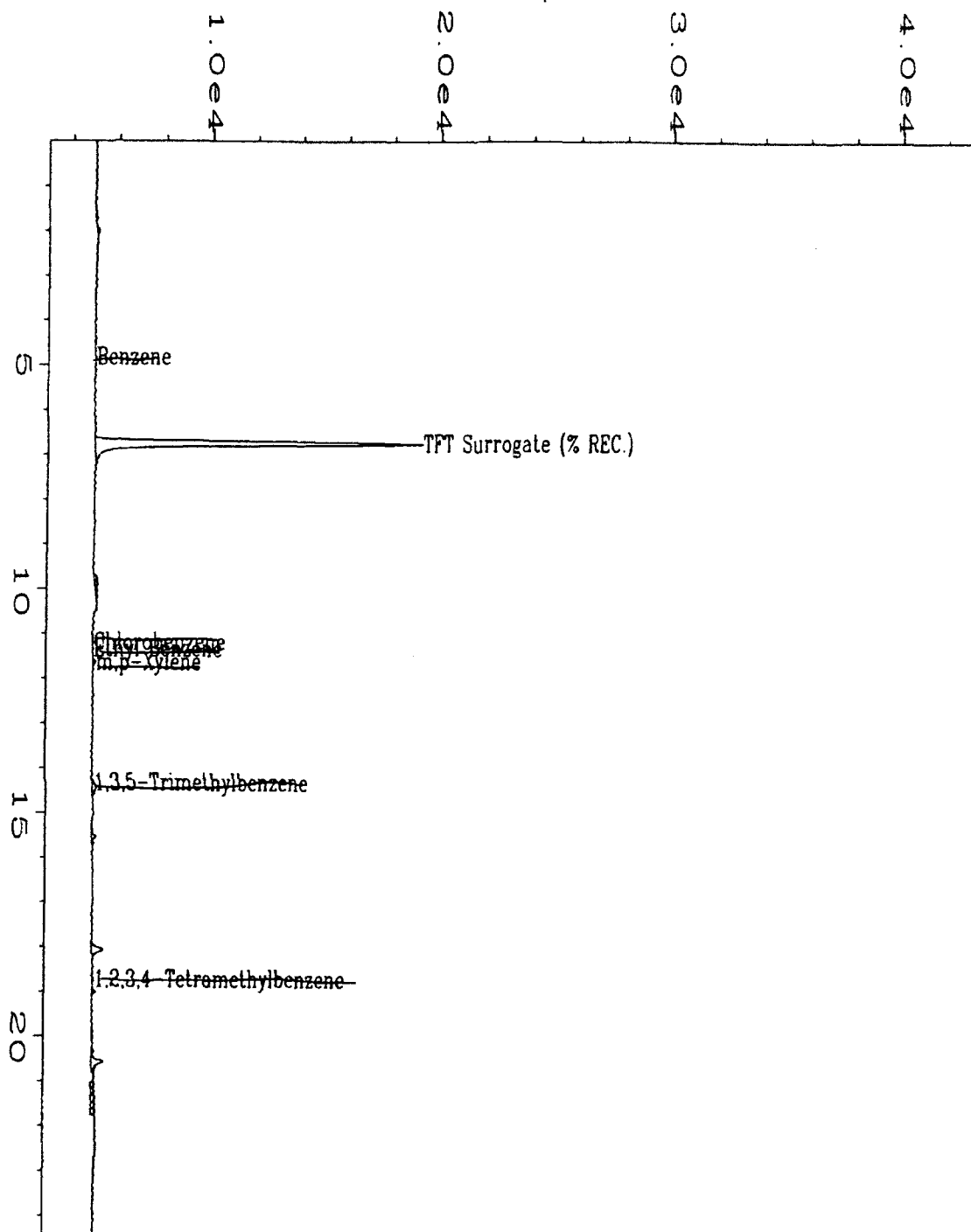
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20317\020R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04187 DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20317.MTF
Acquired on	: 18 Mar 95 01:25 AM	Analysis Method	: BX20317.MTF
Report Created on	: 18 Mar 95 02:31 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 01:39 PM	ISTD Amount	:
Multiplier	: 1		

2m 4/11/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB031795	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/17/95	MacDill	
Date Analyzed	: 3/17/94	Lab Project No.	: 95-0820
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: Water
		Lab File No.	: BX2031709

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 90%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

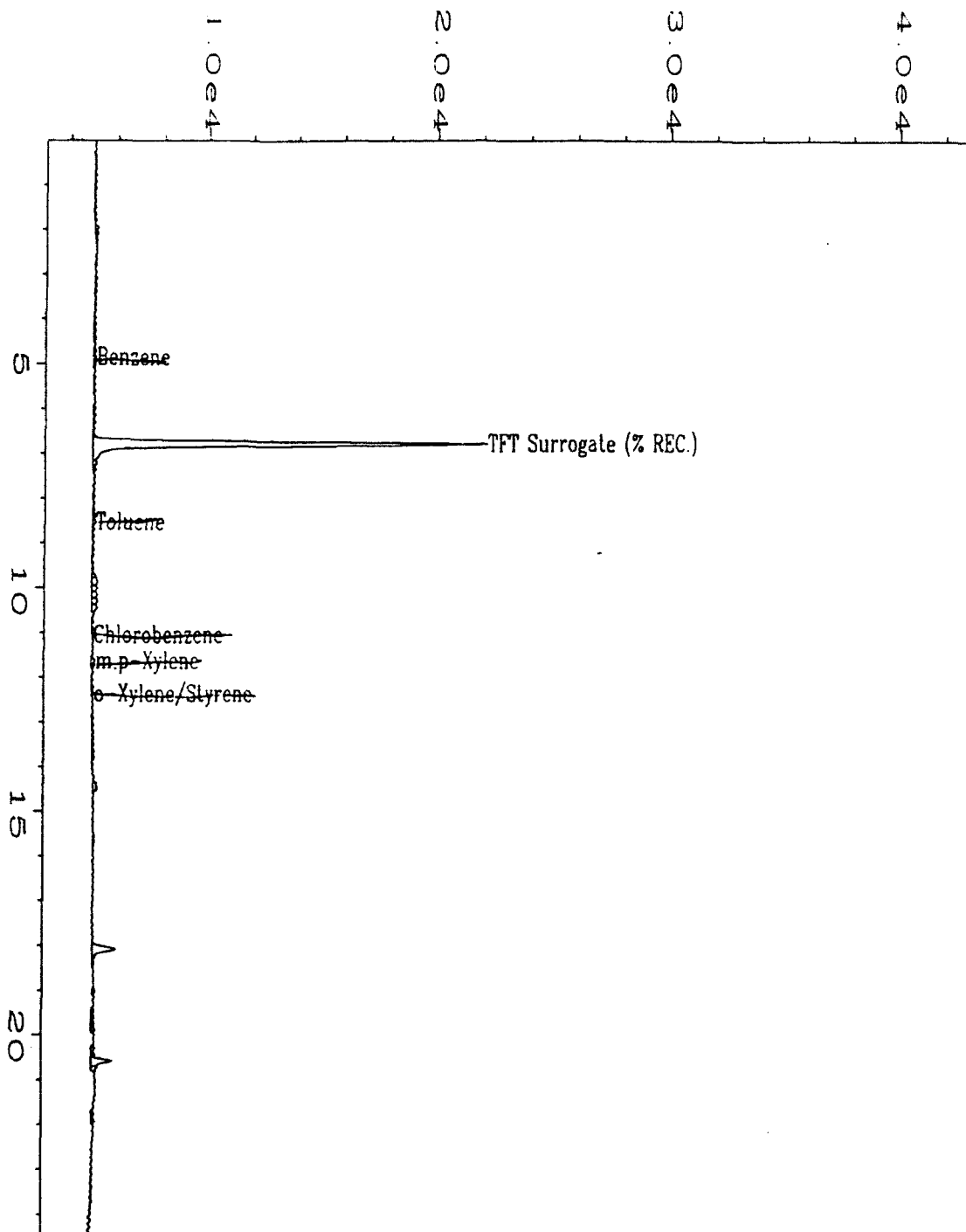
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20317\009R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB031795-WATER	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20317.MTH
Acquired on	: 17 Mar 95 05:27 PM	Analysis Method	: BX20317.MTH
Report Created on:	: 17 Mar 95 05:52 PM	Sample Amount	: 0
Last Recalib on	: 17 Mar 95 04:23 PM	ISTD Amount	:
Multiplier	: 1		

Jim 4/11/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB031895	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/18/95	MacDill	
Date Analyzed	: 3/19/94	Lab Project No.	: 95-0820
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: Water
		Lab File No.	: BX2031822

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 81%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

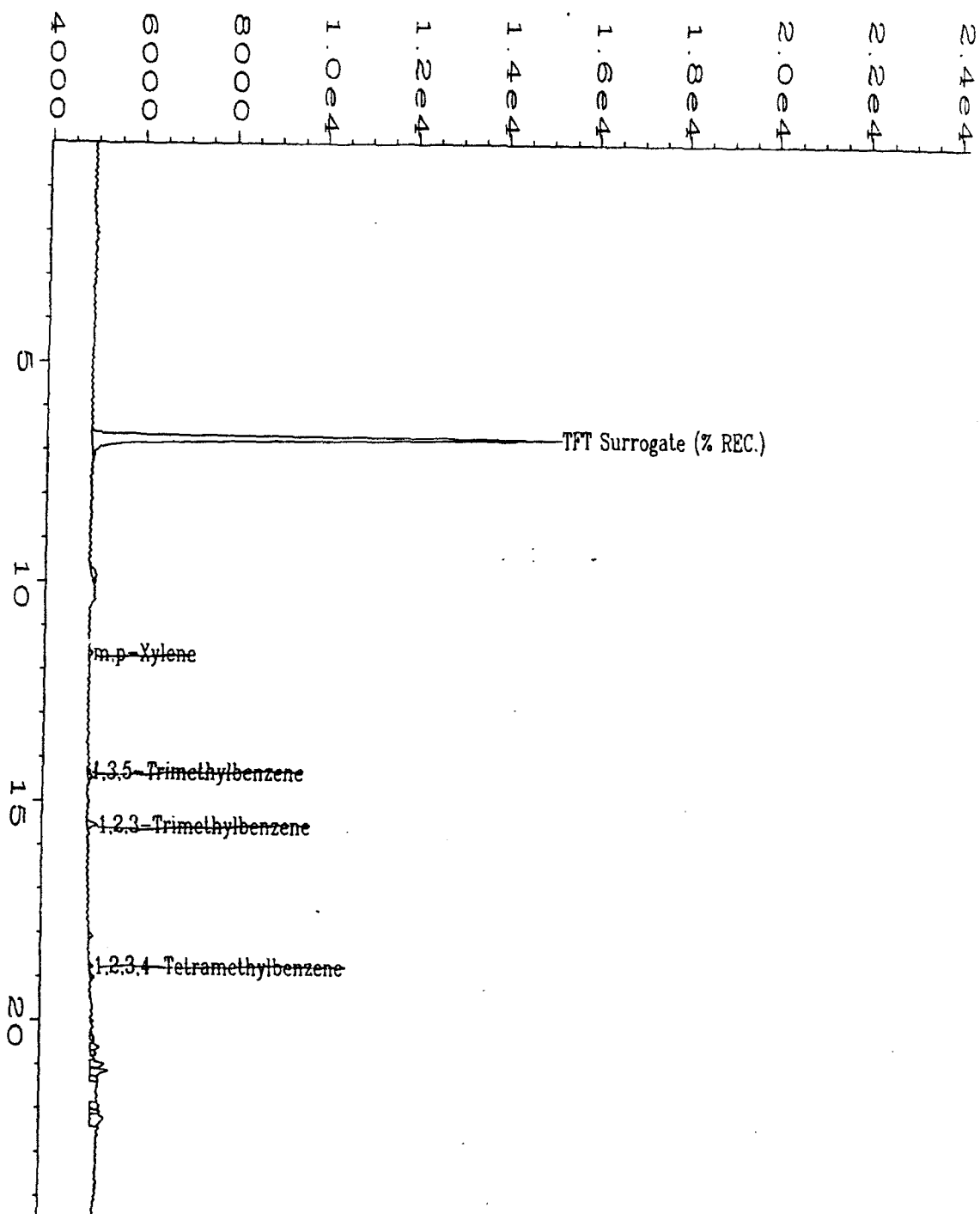
J = Indicates an estimated value when the compound is detected, but is below the Practical
Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the
Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20318\022R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 22
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB031895-WATER	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20318 H
Acquired on	: 19 Mar 95 07:33 AM	Analysis Method	: BX20318.MTH
Report Created on:	19 Mar 95 01:38 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/1/95

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(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB031995	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/19/95	MacDill	
Date Analyzed	: 3/20/94	Lab Project No.	: 95-0820
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: Water
		Lab File No.	: BX2031914

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a.-Trifluorotoluene : 88%
QC Reporting Limits : 70%-131%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

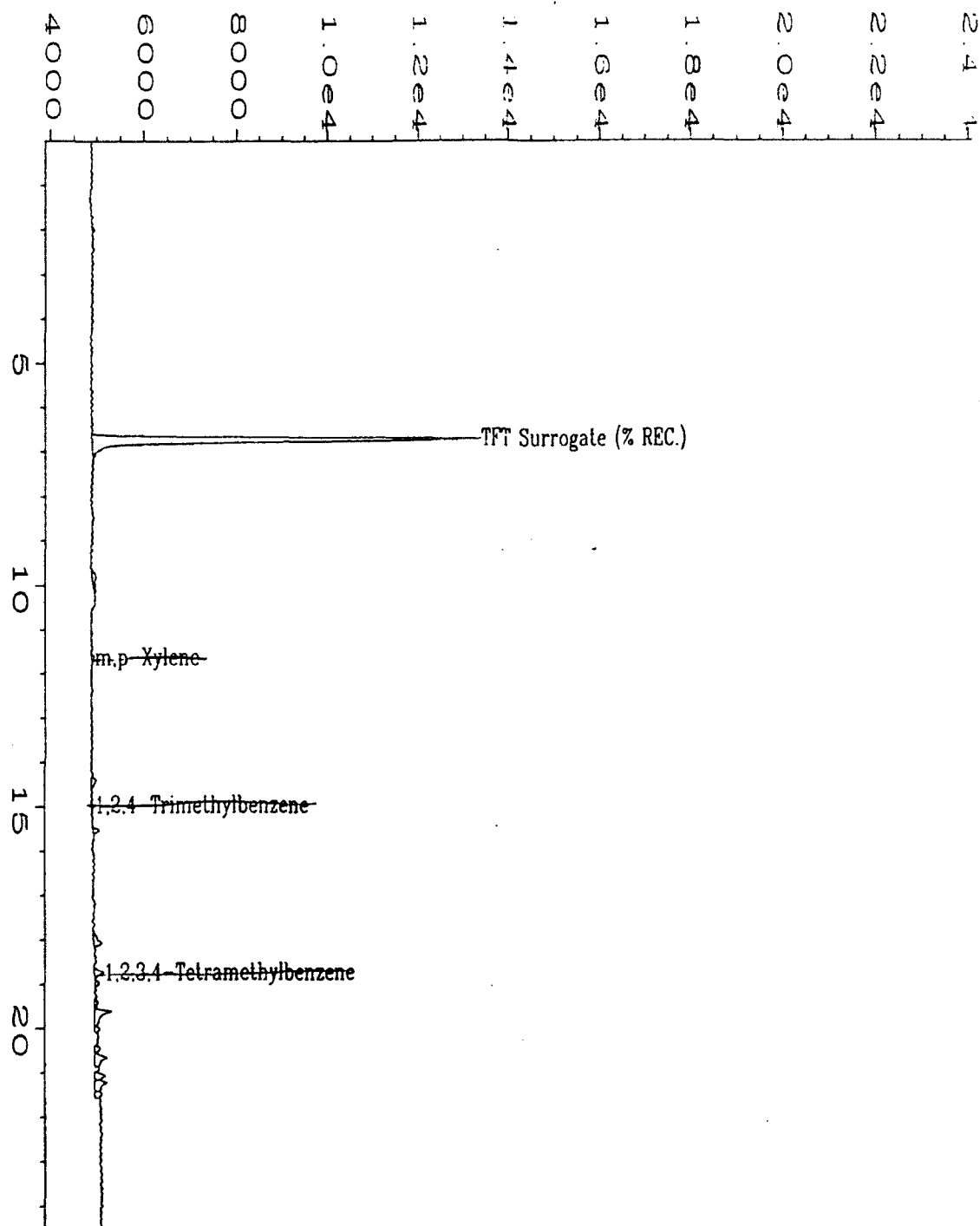
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20319\014R1101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB031995	Sequence Line	: 11
Run Time Bar Code:		Instrument Method:	: BX20319.MTH
Acquired on	: 20 Mar 95 01:30 AM	Analysis Method	: BX20319.MTH
Report Created on:	: 20 Mar 95 01:55 AM	Sample Amount	: 0
Last Recalib on	: 19 Mar 95 10:59 PM	ISTD Amount	:
Multiplier	: 1		

3m 4/11/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MEB032095	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/20/95	MacDill	
Date Analyzed	: 3/20/94	Lab Project No.	: 95-0820
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: MeOH
		Lab File No.	: BX2032013

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4
Toluene	108-88-3	U	4
Ethyl Benzene	100-41-4	U	4
Total Xylene	1330-20-7	U	4
Chlorobenzene	108-90-7	U	4
1,3,5-trimethylbenzene	108-67-8	U	4
1,2,4-trimethylbenzene	95-63-6	U	4
1,2,3-trimethylbenzene	526-73-8	U	4
1,2,3,4-tetramethylbenzene	488-23-3	U	4

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 103%
QC Reporting Limits : 70%-131%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

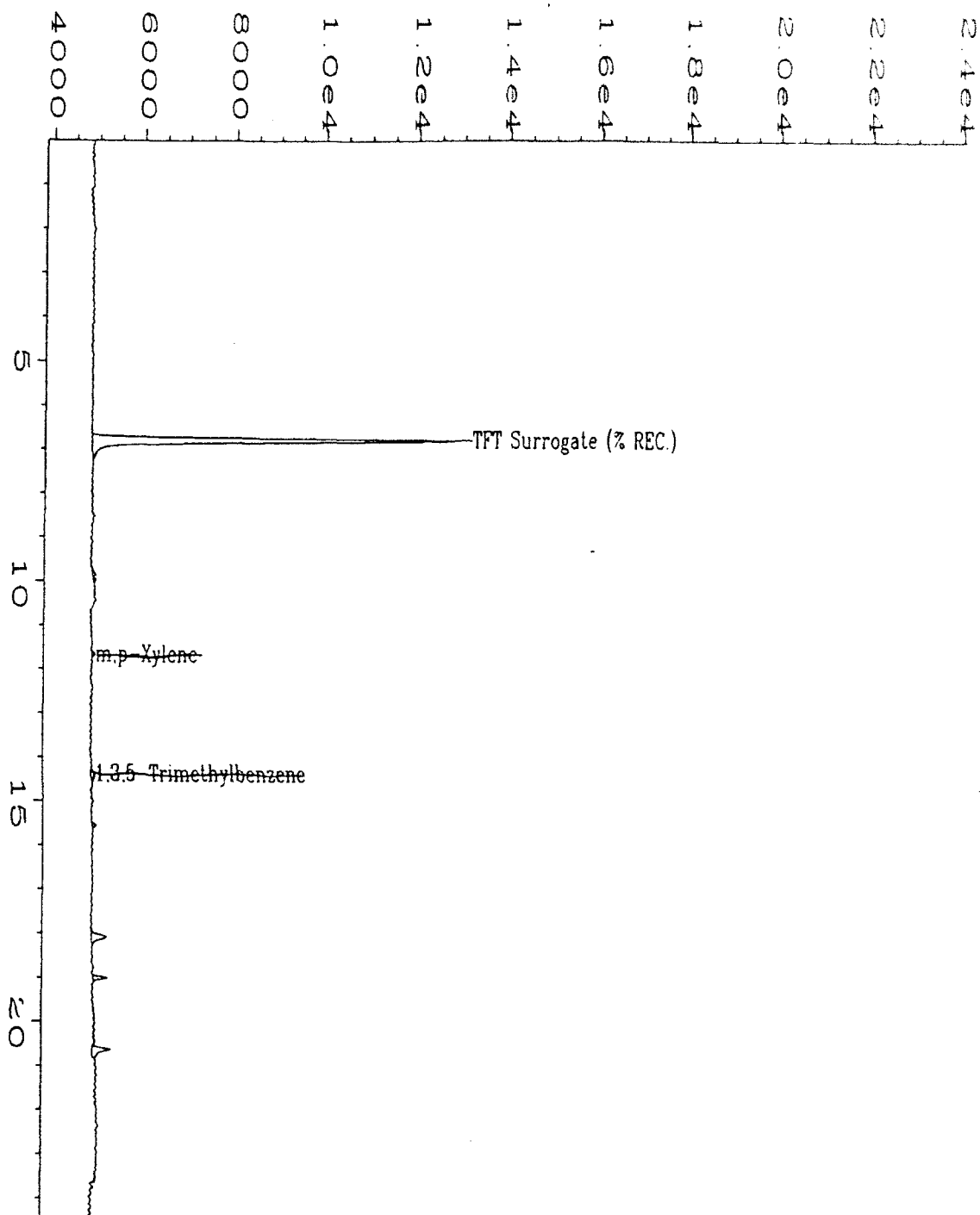
J = indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20320\013R1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB032095	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	BX20320.MTH
Acquired on	: 20 Mar 95 09:53 PM	Analysis Method	: BX20320.MTH
Report Created on:	20 Mar 95 10:19 PM	Sample Amount	: 0
Last Recalib on	: 20 Mar 95 06:26 PM	ISTD Amount	:
Multiplier	: 1		

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(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB032095	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/20/95	MacDill	
Date Analyzed	: 3/20/94	Lab Project No.	: 95-0820
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: Water
		Lab File No.	: BX2032011

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylene	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 102%
QC Reporting Limits : 70%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

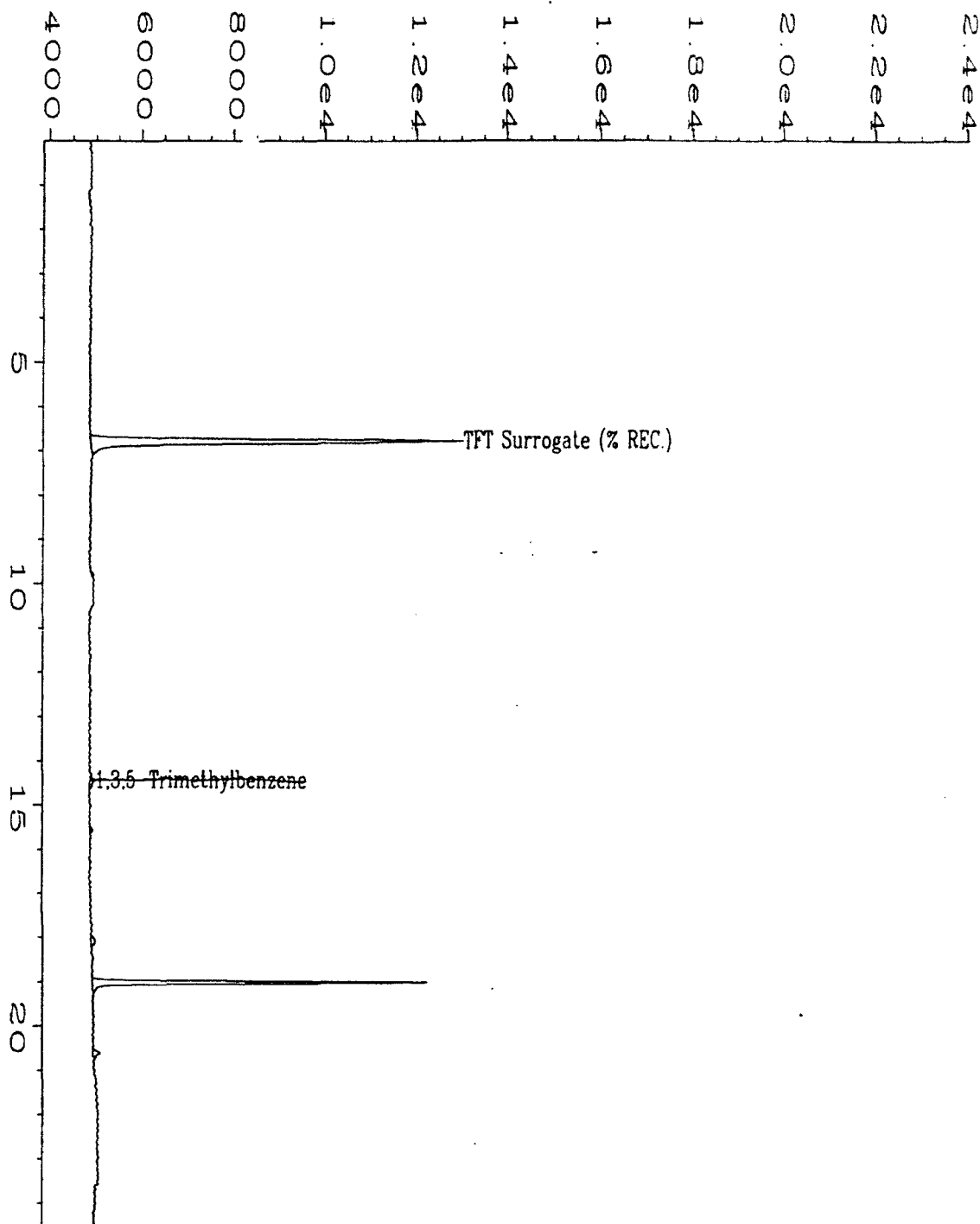
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20320\011R1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB032095-WATER	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20320.MTH
Acquired on	: 20 Mar 95 08:20 PM	Analysis Method	: BX20320.MTH
Report Created on:	: 20 Mar 95 08:45 PM	Sample Amount	: 0
Last Recalib on	: 20 Mar 95 06:26 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/13/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS031895 Dilution Factor : 1.00
Date Extracted/Prepared : 3/18/95 Method : 602
Date Analyzed : 3/18/95 Matrix : Water
Spike Amount (ug/L) : 40.0 Lab File No. : BX20318010

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	36.0	90.0%	57.5%-110.0%
Toluene	108-88-3	34.7	86.8%	65.0%-107.5%
Ethyl Benzene	100-41-4	35.5	88.8%	65.0%-120.0%
m,p-Xylene	NA	36.2	90.5%	62.5%-117.5%
o-Xylene	95-47-6	34.1	85.3%	65.0%-120.0%
Chlorobenzene	108-90-7	35.2	88.0%	70.0%-115.0%
1,3,5-trimethylbenzene	108-67-8	35.9	89.8%	60.0%-117.5%
1,2,4-trimethylbenzene	95-63-6	30.5	76.3%	57.5%-115.0%
1,2,3-trimethylbenzene	526-73-8	34.3	85.8%	72.5%-122.5%
1,2,3,4-tetramethylbenzene	488-23-3	34.6	86.5%	50.0%-150%
Surrogate Recovery (α,α,α -Trifluorotoluene):		95%	70%-130% (QC limits)	

QUALIFIERS:

E = Extrapolated value

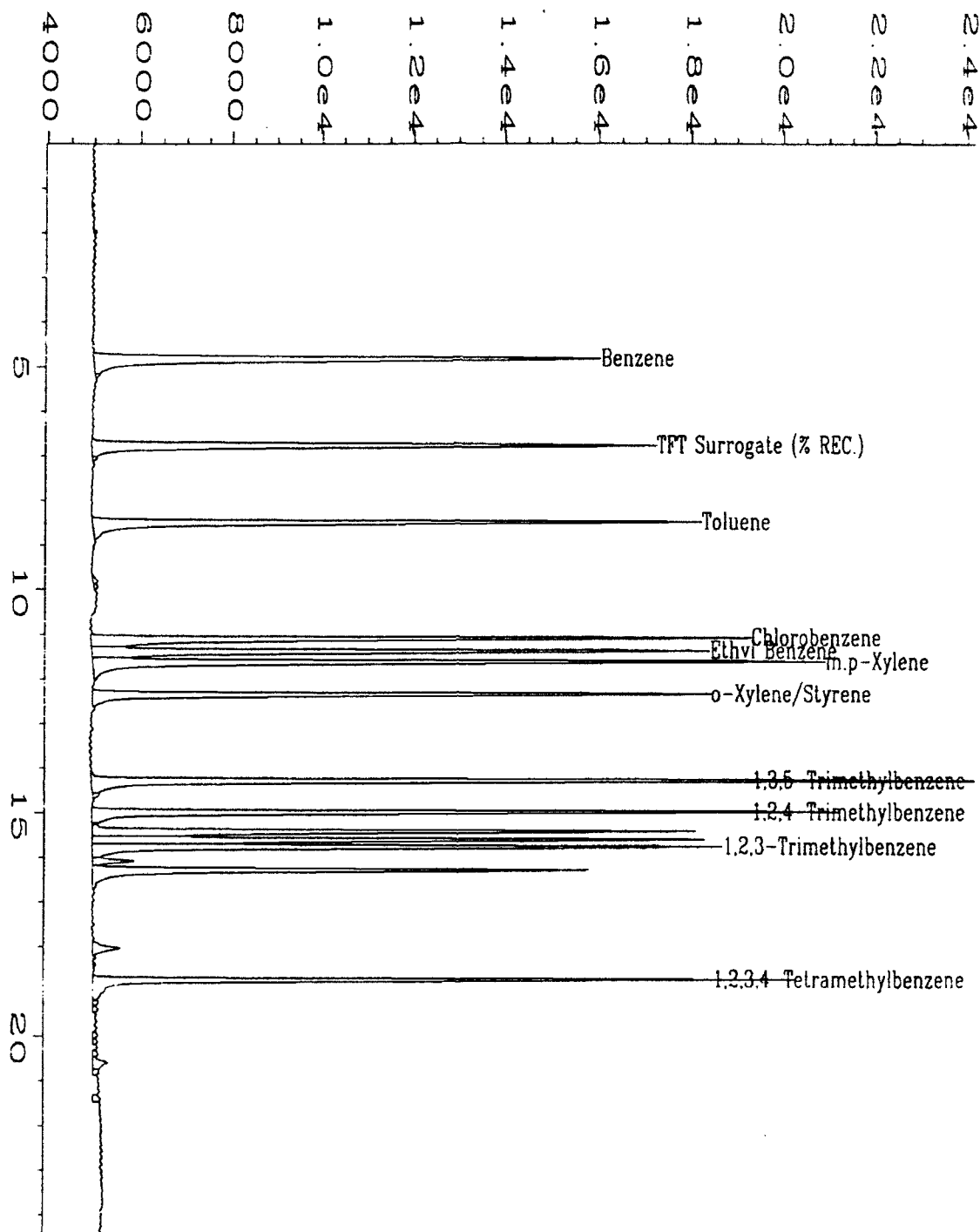
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical
Quantitation Limit (PQL).

NA = Not available/Not analyzed


Analyst



Data File Name	: C:\HPCHEM\2\DATA\BX20318\010R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS031895	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20318.MT
Acquired on	: 18 Mar 95 10:39 PM	Analysis Method	: BX20318.MT
Report Created on	: 04 Apr 95 04:19 AM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 1		

External Standard Report

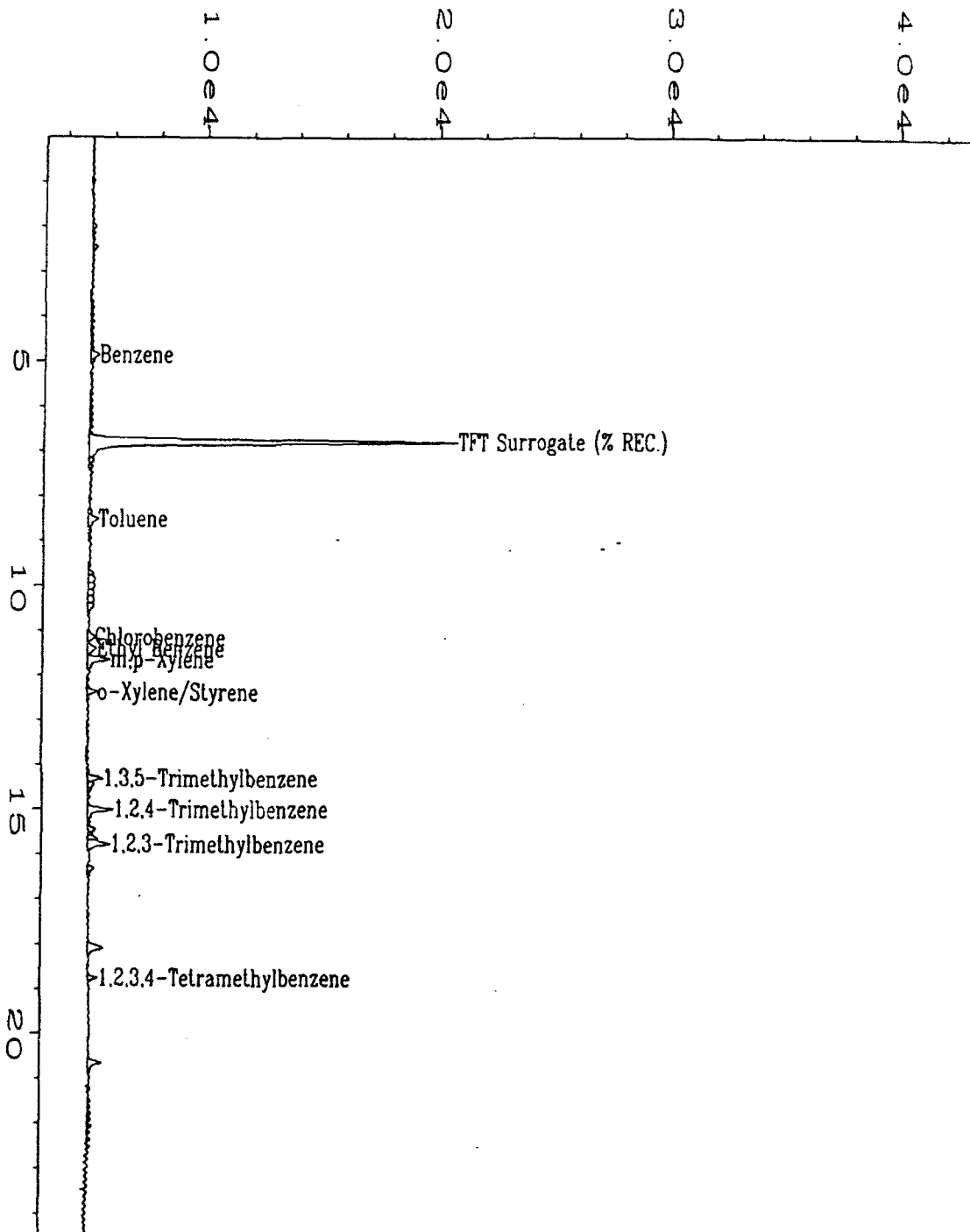
File Name : C:\HPCHEM\2\DATA\BX20317\008R0801.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : 1.0 ppb BTEX MIX
 Run Time Bar Code:
 Acquired on : 17 Mar 95 04:43 PM
 Report Created on: 18 Mar 95 02:05 PM
 Last Recalib on : 18 MAR 95 01:39 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 8
 Injection Number : 1
 Sequence Line : 8
 Instrument Method: BX20317.MTH
 Analysis Method : BX20317.MTH
 Sample Amount : 0
 ISTD Amount :

Sig. 2 in C:\HPCHEM\2\DATA\BX20317\008R0801.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
2.466	1156	PV	0.076	1	0.497	
4.867	2629	VV	0.095	1	2.632	Benzene
6.789	108107	VV	0.105	1-R	81.851	TFT Surrogate (% REC.)
8.526	3772	VV	0.118	1	2.374	Toluene
11.158	2728	VV	0.119	1	2.707	Chlorobenzene
11.410	3157	VV	0.113	1	1.591	Ethyl Benzene
11.654	6815	VV	0.104	1	1.054	m,p-Xylene
12.379	2809	PV	0.094	1	1.931	o-Xylene/Styrene
13.316	3508	VV	0.074	1	0.778	1,3,5-Trimethylbenzene
15.007	7245	VV	0.090	1	0.801	1,2,4-Trimethylbenzene
15.455	1974	VV	0.091	1	1.830	
15.569	803	VV	0.060	1	0.735	
15.781	6531	VV	0.093	1	-1.117	1,2,3-Trimethylbenzene
16.325	1656	VV	0.082	1	0.832	
18.759	1996	VV	0.069	1	0.576	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
3	6.804	6.789	-0.015



Data File Name : C:\HPCHEM\2\DATA\BX20317\008R0801.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : 1.0 ppb BTEX MIX
 Run Time Bar Code:
 Acquired on : 17 Mar 95 04:43 PM
 Report Created on: 17 Mar 95 05:08 PM
 Last Recalib on : 17 Mar 95 04:23 PM
 Multiplier : 1
 Sample Info : STD REF #1644, 3/10/95, 0.5 UG/ML (M & P-XYLENE PRESENT); +
 1,2,3 & 1,2,4-Trimethylbenzene

Page Number : 1
 Vial Number : 8
 Injection Number : 1
 Sequence Line : 8
 Instrument Method: BX20317.MTH
 Analysis Method : BX20317.MTH
 Sample Amount : 0
 ISTD Amount :

External Standard Report

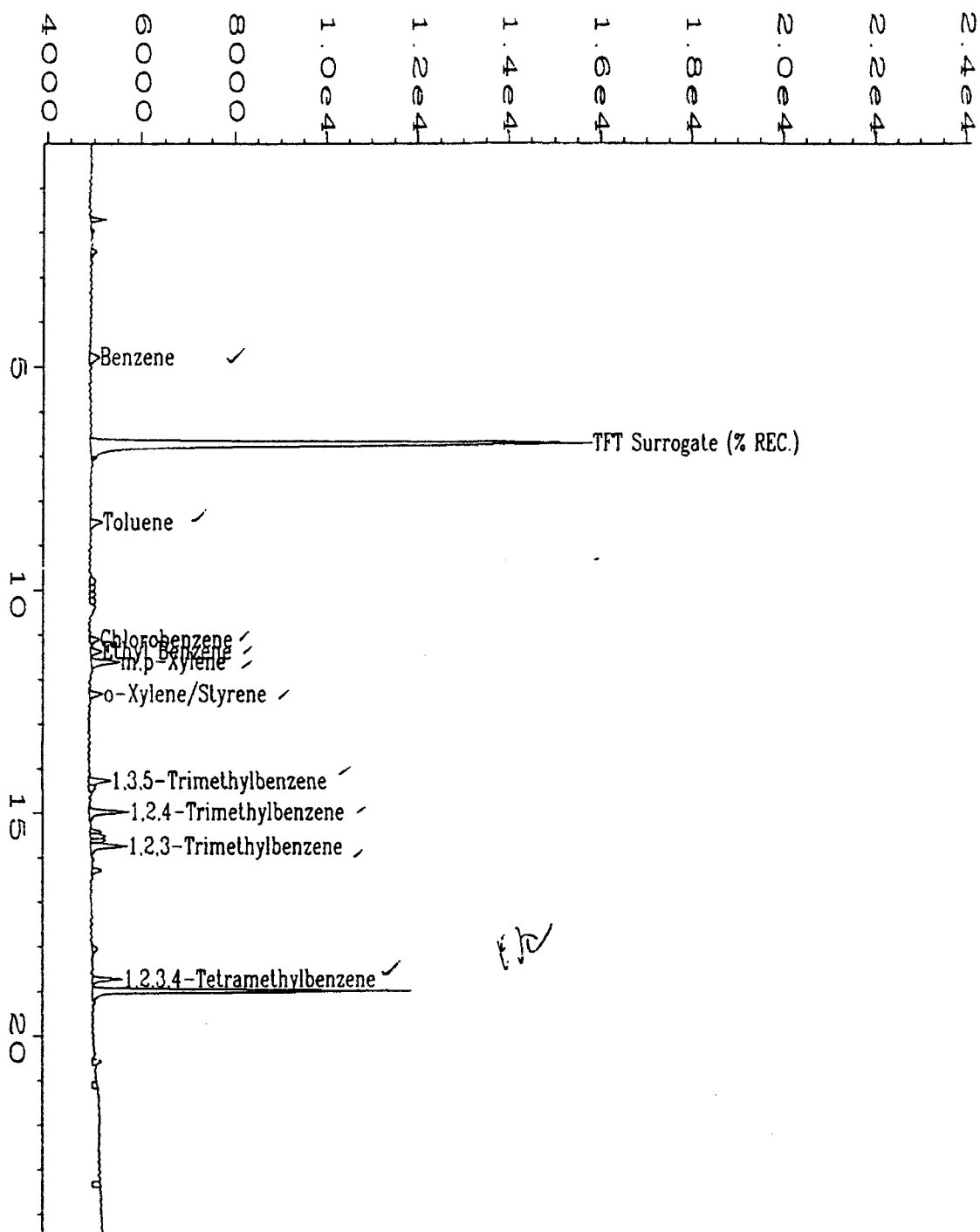
Data File Name : C:\HPCHEM\2\DATA\BX20318\018R0801.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX2 Vial Number : 18
 Sample Name : 1.0 ppb BTEX MIX Injection Number : 1
 Run Time Bar Code: Sequence Line : 8
 Acquired on : 19 Mar 95 04:36 AM Instrument Method: BX20318.MTH
 Report Created on: 19 Mar 95 01:36 PM Analysis Method : BX20318.MTH
 Last Recalib on : 18 MAR 95 11:33 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :
 Sample Info : STD REF #1644, 3/10/95, 0.5 UG/ML (M & P-XYLENE PRESENT); +
 1,2,3 & 1,2,4-Trimethylbenzene

Sig. 2 in C:\HPCHEM\2\DATA\BX20318\018R0801.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
2.418	985	PV	0.100	1	0.909	
4.776	2000	VV	0.114	1	2.263	Benzene
6.713	75070	PV	0.101	1-R	87.562	TFT Surrogate (% REC.)
8.469	1891	VV	0.090	1	1.678	Toluene
11.099	1318	PV	0.088	1	2.299	Chlorobenzene
11.368	1533	VV	0.094	1	1.121	Ethyl Benzene
11.602	3867	VV	0.091	1	0.0462	m,p-Xylene
12.323	1681	BV	0.082	1	1.330	o-Xylene/Styrene
14.273	2648	VV	0.077	1	0.423	1,3,5-Trimethylbenzene
14.967	4818	PV	0.079	1	1.263	1,2,4-Trimethylbenzene
15.240	* not found *			1		
15.418	1124	VV	0.058	1	2.046	
15.739	4645	VV	0.083	1	-0.240	1,2,3-Trimethylbenzene
16.089	* not found *			1		
18.722	2932	PV	0.064	1	0.282	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
3	6.750	6.713	-0.037

Not all calibrated peaks were found



Data File Name	: C:\HPCHEM\2\DATA\BX20318\018R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: 1.0 ppb BTEX MIX	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20318.MTH
Acquired on	: 19 Mar 95 04:36 AM	Analysis Method	: BX20318.MTH
Report Created on	: 19 Mar 95 01:36 PM	Sample Amount	: 0
Last Recalib on	: 18 MAR 95 11:33 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: STD REF #1644, 3/10/95, 0.5 UG/ML (M & P-XYLENE PRESENT); + 1,2,3 & 1,2,4-Trimethylbenzene		

External Standard Report

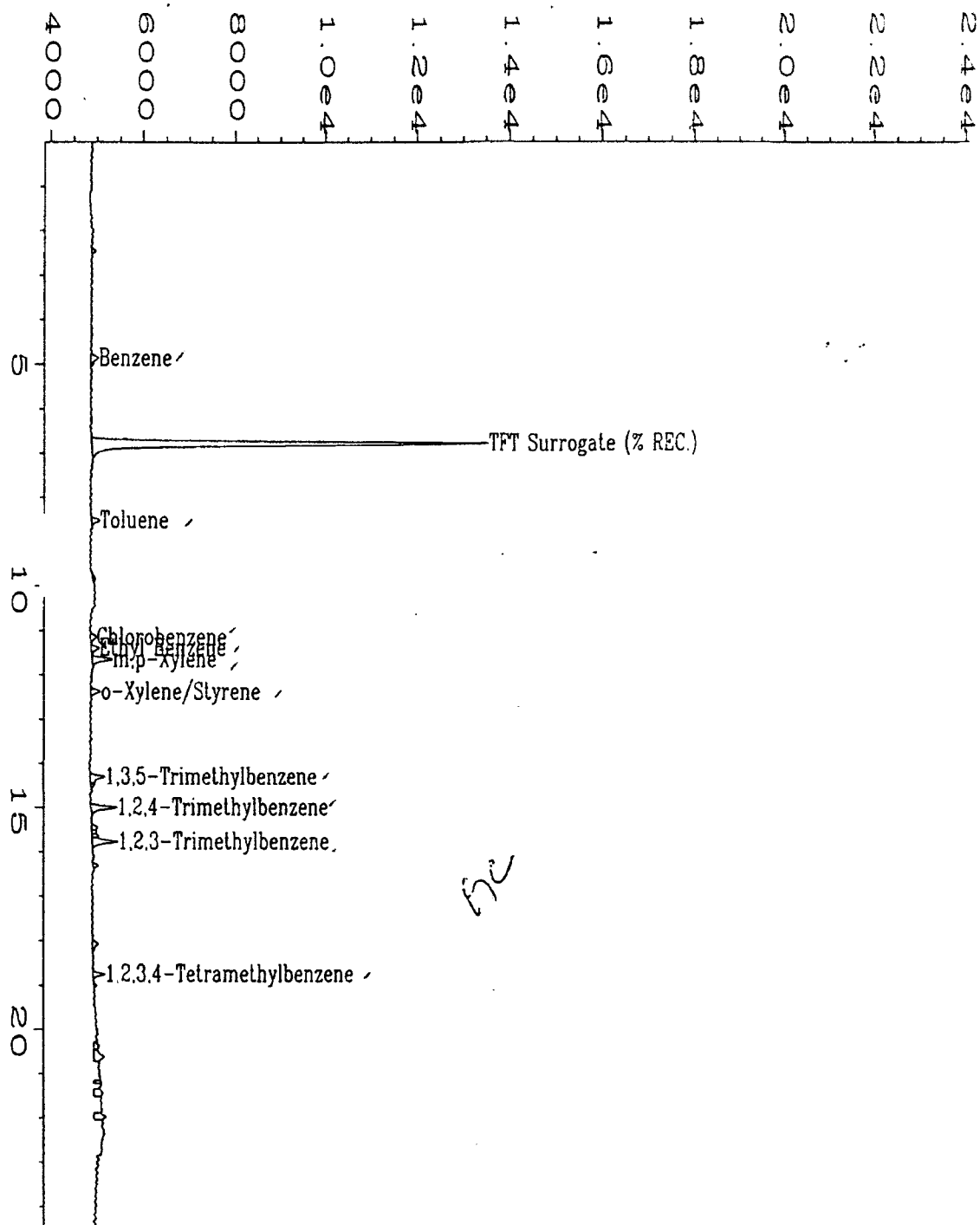
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 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX2 Vial Number : 10
 Sample Name : 1.0 ppb BTEX MIX Injection Number : 1
 Run Time Bar Code: Sequence Line : 10
 Acquired on : 20 Mar 95 07:34 PM Instrument Method: BX20320.MTH
 Report Created on: 20 Mar 95 07:59 PM Analysis Method : BX20320.MTH
 Last Recalib on : 20 Mar 95 06:26 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :
 Sample Info : STD REF #1644, 3/10/95, 0.5 UG/ML (M & P-XYLENE PRESENT); +
 1,2,3 & 1,2,4-Trimethylbenzene

Sig. 2 in C:\HPCHEM\2\DATA\BX20320\010R1001.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
2.462	464	PV	0.060	1	1.993	
4.856	1454	VV	0.115	1	3.235	Benzene
6.775	56877	PV	0.092	1-R	107.892	TFT Surrogate (% REC.)
8.514	1060	PV	0.083	1	2.186	Toluene
11.146	1048	PV	0.101	1	3.007	Chlorobenzene
11.395	1128	VV	0.091	1	1.756	Ethyl Benzene
11.648	2569	VV	0.086	1	0.893	m,p-Xylene
12.369	1256	BV	0.080	1	2.110	o-Xylene/Styrene
14.303	2019	PV	0.097	1	1.387	1,3,5-Trimethylbenzene
14.995	3170	PV	0.082	1	1.181	1,2,4-Trimethylbenzene
15.240	* not found *			1		
15.444	724	BV	0.074	1	2.086	
15.771	3314	VV	0.086	1	0.119	1,2,3-Trimethylbenzene
16.089	* not found *			1		
18.751	1242	PV	0.075	1	1.846	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
3	6.750	6.775	0.025

Not all calibrated peaks were found



Data File Name : C:\HPCHEM\2\DATA\BX20320\010R1001.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX2 Vial Number : 10
 Sample Name : 1.0 ppb BTEX MIX Injection Number : 1
 Run Time Base Code : Sequence Line : 10
 Acquired on : 20 Mar 95 07:34 PM Instrument Method: BX20320.MTH
 Report Created on : 20 Mar 95 07:59 PM Analysis Method : BX20320.MTH
 Last Recalibration : 20 Mar 95 06:26 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :
 Sample Info : STD REF #1644, 3/10/95, 0.5 UG/ML (M & P-XYLENE PRESENT); +
 1,2,3 & 1,2,4-Trimethylbenzene

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)

Date Sampled : 3/8,9,10,13/95 Client Project Number : 722450.21020/MAC DILL
Date Received : 3/14/95 Lab Project Number : 95-0820
Date Prepared : 3/16,17,22,24/95 Matrix : Soil
Date Analyzed : 3/16,17,22,24/95 Method Number : 5030/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH* mg/Kg	RL* mg/Kg
MB031695	METHOD BLANK	100%	U	0.10
MB032295	METHOD BLANK	100%	U	0.10
MBC32395	METHOD BLANK	90%	U	0.10
X04173	24 MP-1A(3'-4') ✓	116%	U	0.11
X04174	24 MP-1B(8'-9') ✓	118%	1.1	0.12
X04175	24 MP-2(3'-4') ✓	115%	U	0.12
X04176	24 MP-3 (3-5) ✓	112%	0.36	0.12
X04177	24-MP-4 (3-5) ✓	115%	U	0.12
X04178	24 MP-5 (3-5) ✓	113%	U	0.12
X04179	24 MP-6 (4-6) ✓	114%	U	0.12
X04181	24SS-1 (4-6) ✓	120%	4.7	0.1
X04182	24SS-2 (4-6) ✓	118%	3.0	0.1
X04183	75SS-1 (3-5)	108%	230	6.0
X04183 DUP	75SS-1 (3-5)	113%	590	6.0
X04184	75SS-1 (7-9)	101%	0.36	0.12
X04185	75SS-2 (3-5)	128%	4800E	5.7
X04186	75SS-2 (9-11)	101%	U	0.12
X04186 DUP	75SS-2 (9-11)	116%	0.41	0.12

QUALIFIERS

U = TVH analyzed for but not detected.

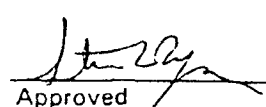
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

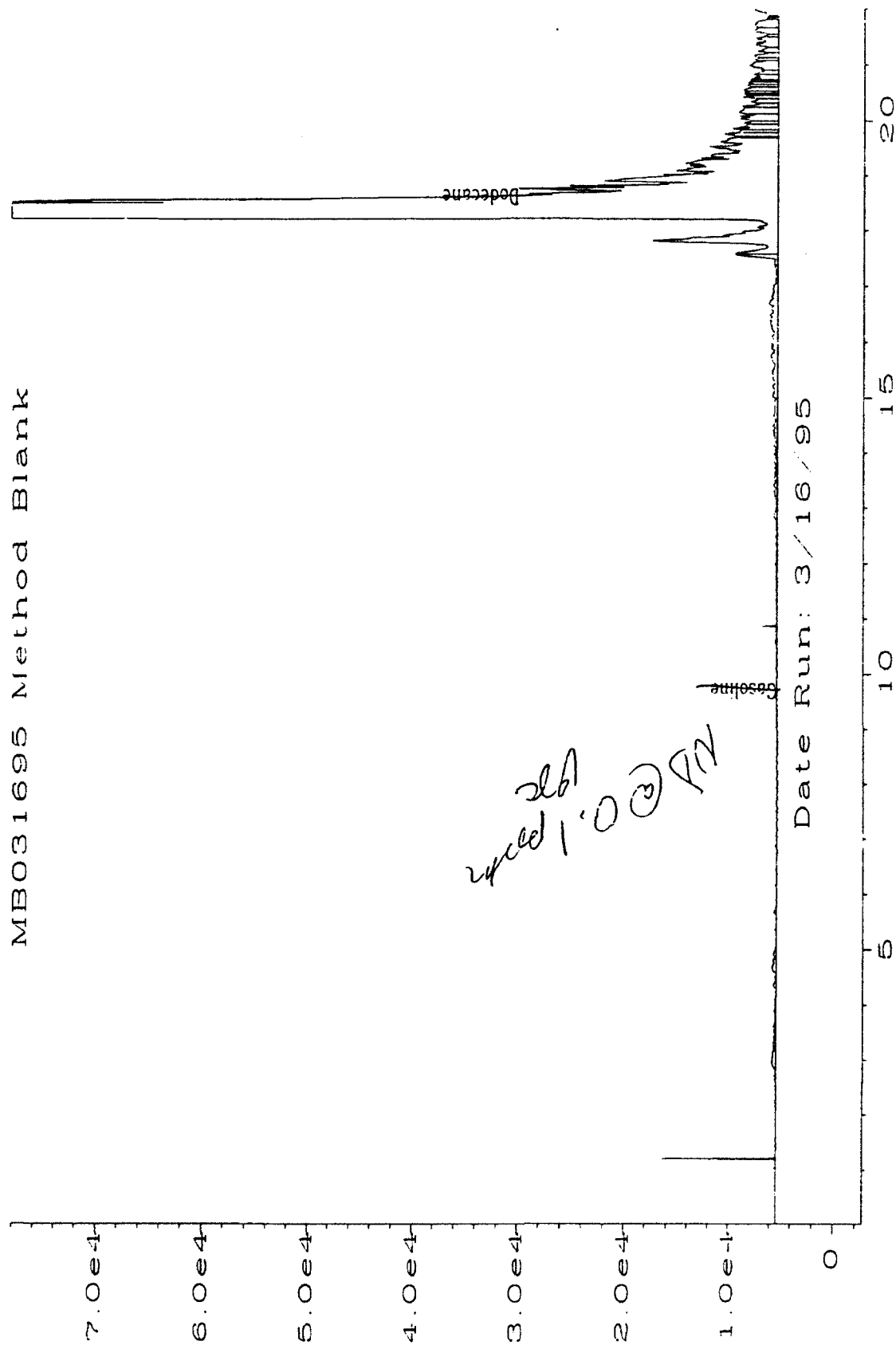
RL = Reporting Limit

* = Based on dry weight.


Analyst

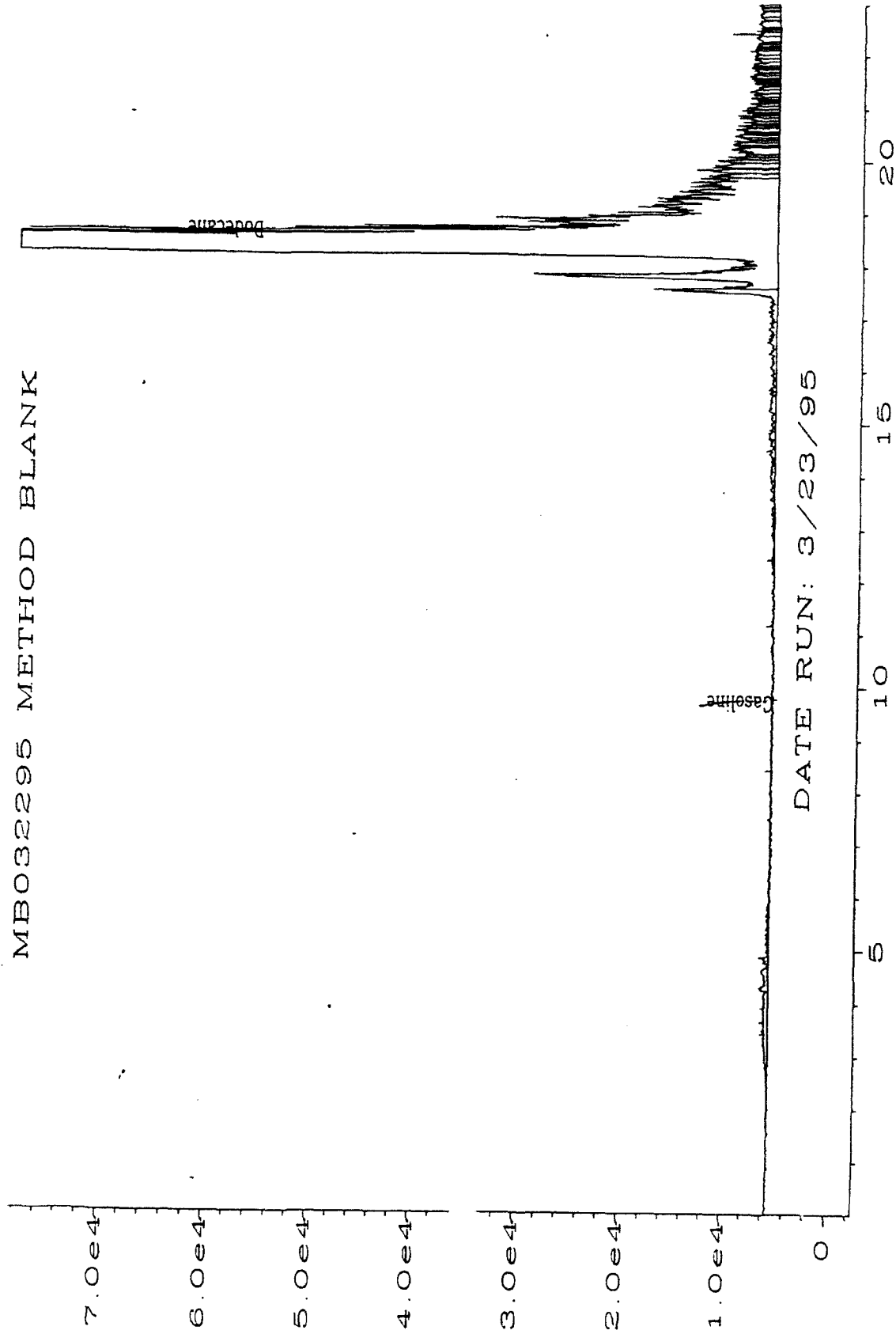

Approved

MB031695 Method Blank



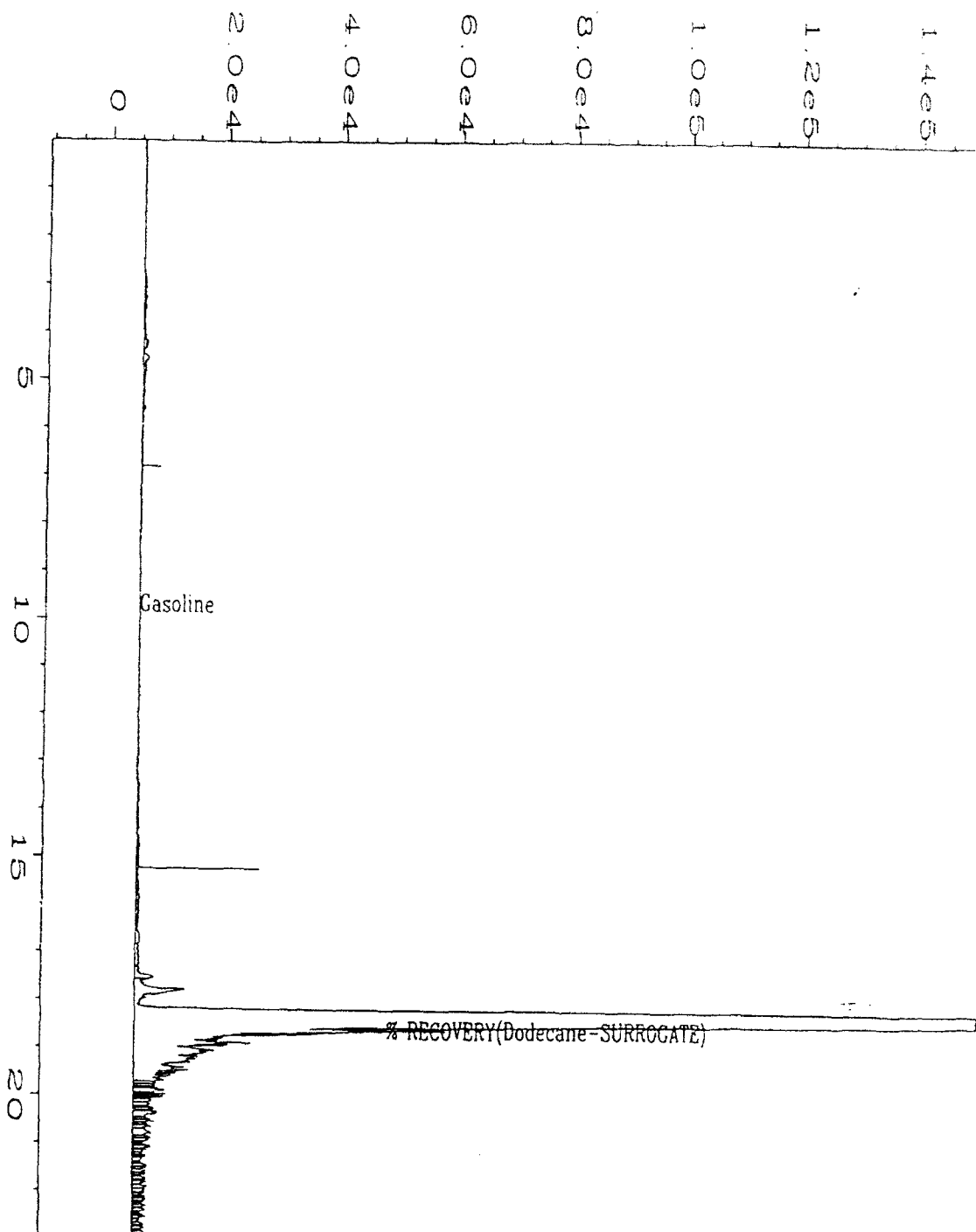
Sig. 1 in C:\HPCHEM\1\DATA\TVH0316\001F0101.D

MB032295 METHOD BLANK



Sig. 1 in C:\HPCHEM\1\DATA\TVH0322\024F0101.D

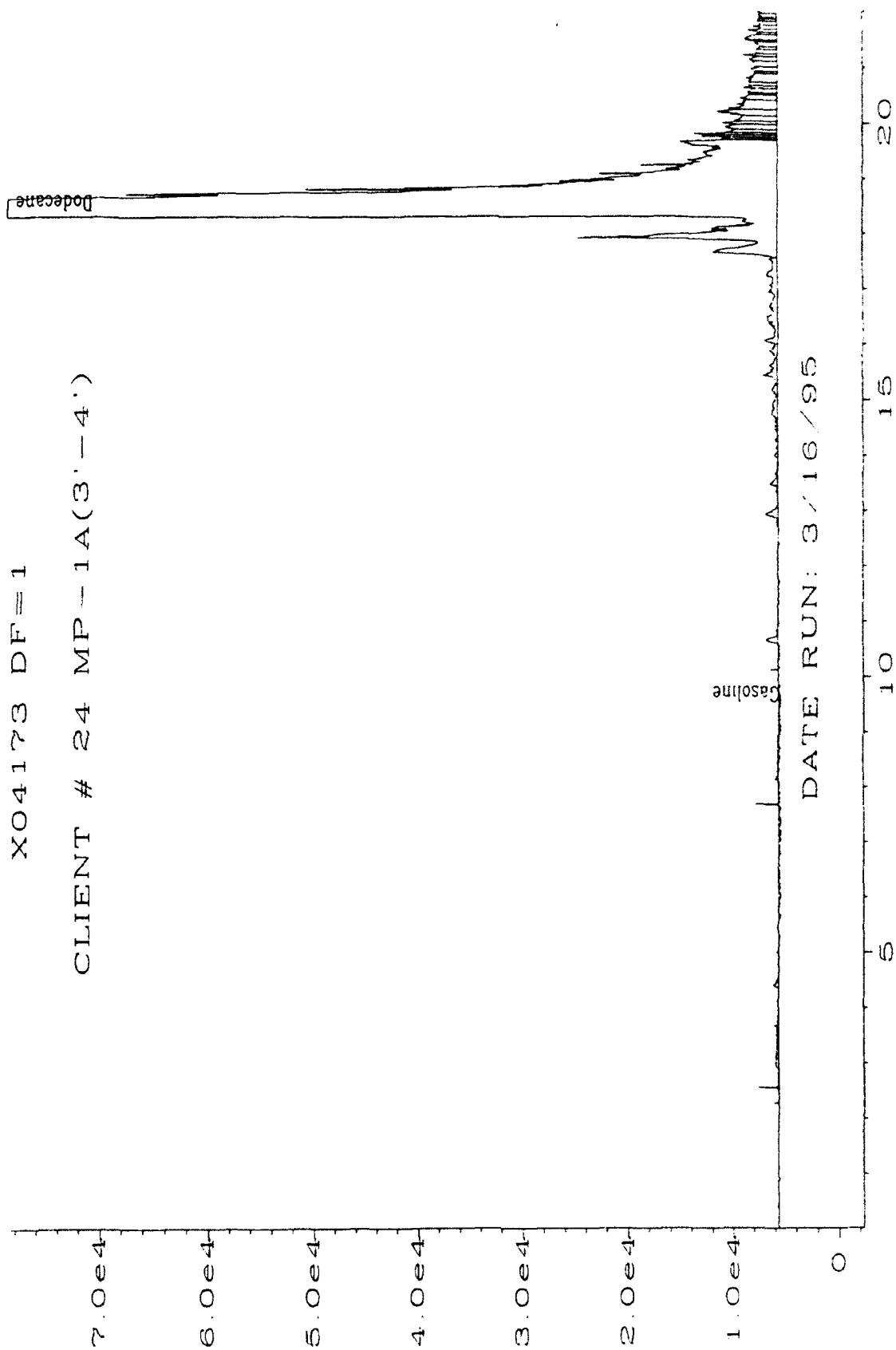
3/23/95



ata File Name	: C:\HPCHEM\1\DATA\tvh0323\001F0101.D	Page Number	: 1
operator	: Dawn N. Guildner	Vial Number	: 1
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB032395	Sequence Line	: 1
an Time Bar Code:		Instrument Method:	TVH0323.MT..
quired on	: 23 Mar 95 05:56 PM	Analysis Method	: TVH0323.MTH
Report Created on:	23 Mar 95 06:20 PM	Sample Amount	: 0
st Recalib on	: 23 MAR 95 12:18 PM	ISTD Amount	:
ltiplier	: 1		

X04173 DF=1

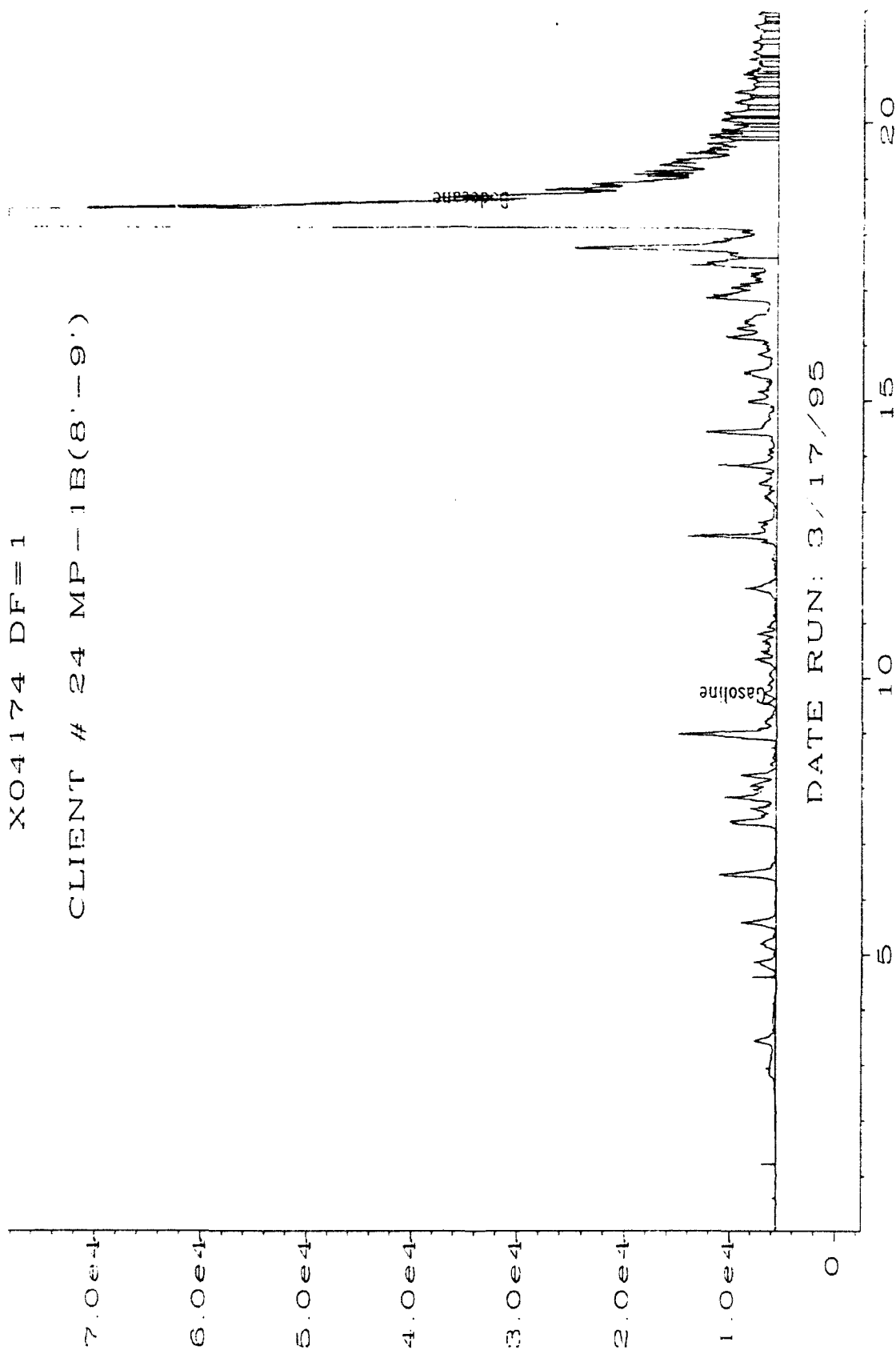
CLIENT # 24 MP-1A(3'-4')



Sig. 1 in C:\HPCHEM\1\DATA\TVH0316\0009F0101.D

XO4174 DF=1

CLIENT # 24 MP-1B(8'-9')



Sig. 1 in C:\NHP\CHEM\INDATANTV\H0316\028F0101.D

X04175 DF=1
CLIENT # 24 MP-2 (3'-4')

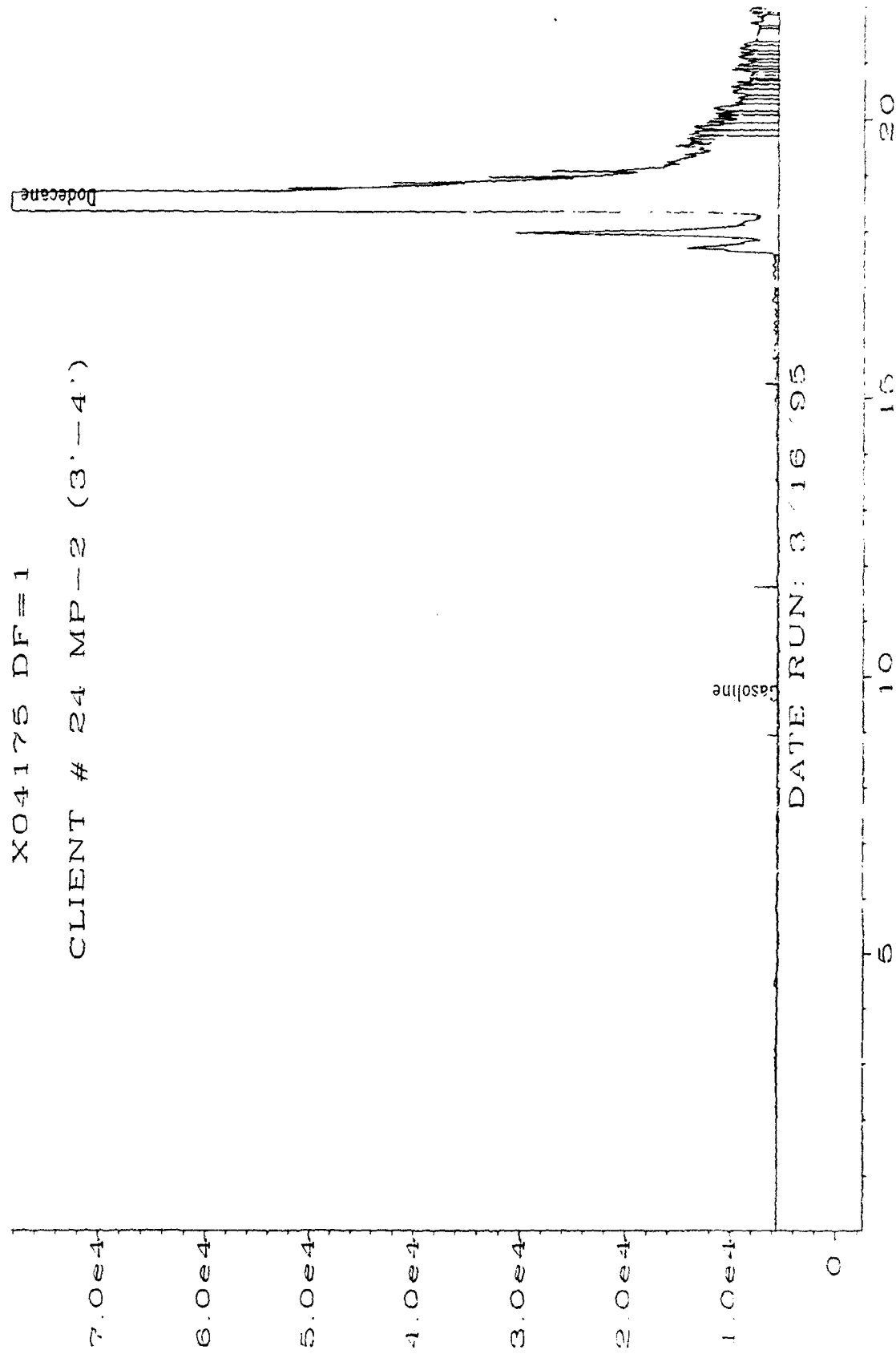
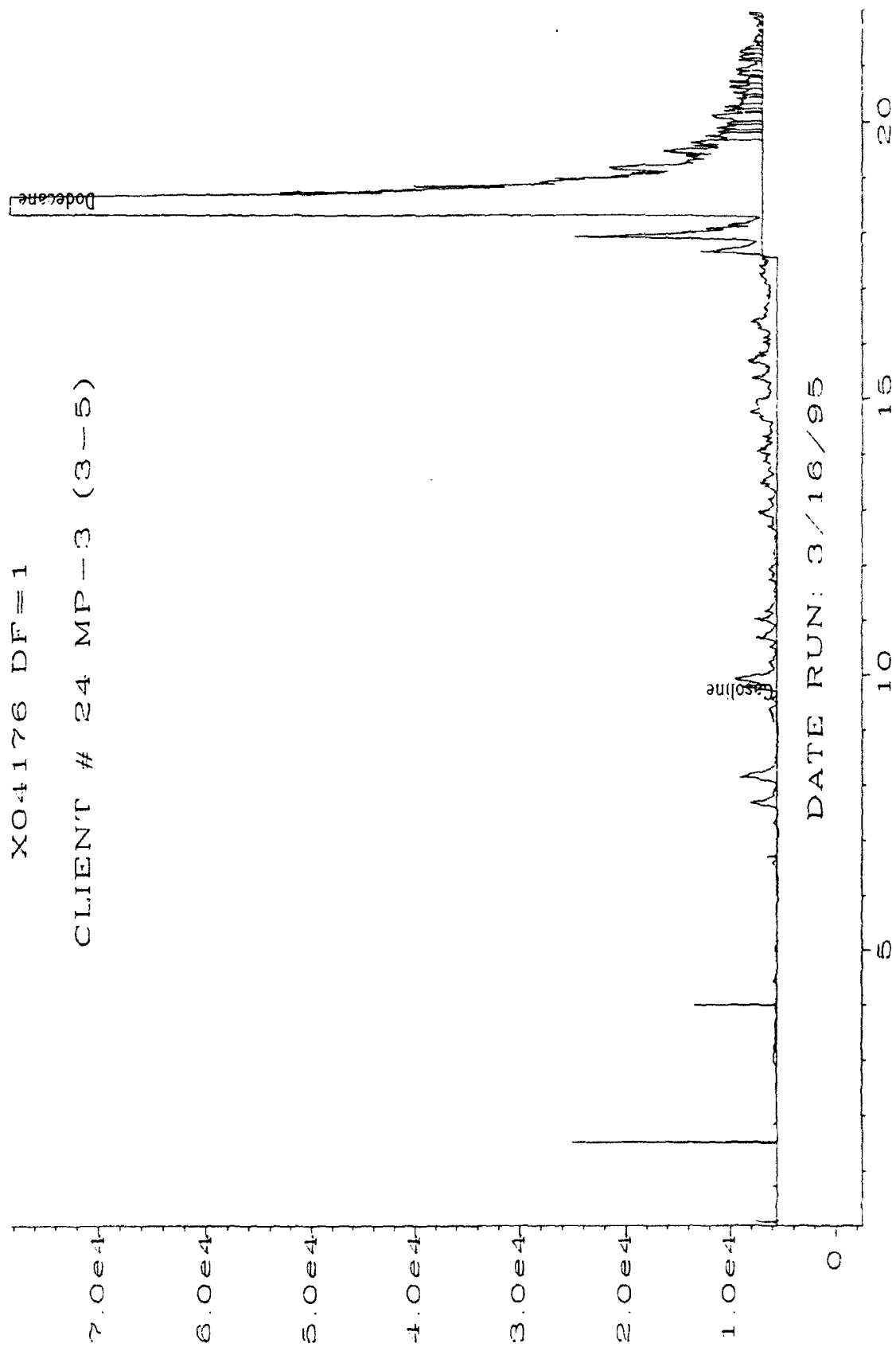


Fig. 1 in CNHPCHEN1.DAT\T\H0316.01\F0101.D

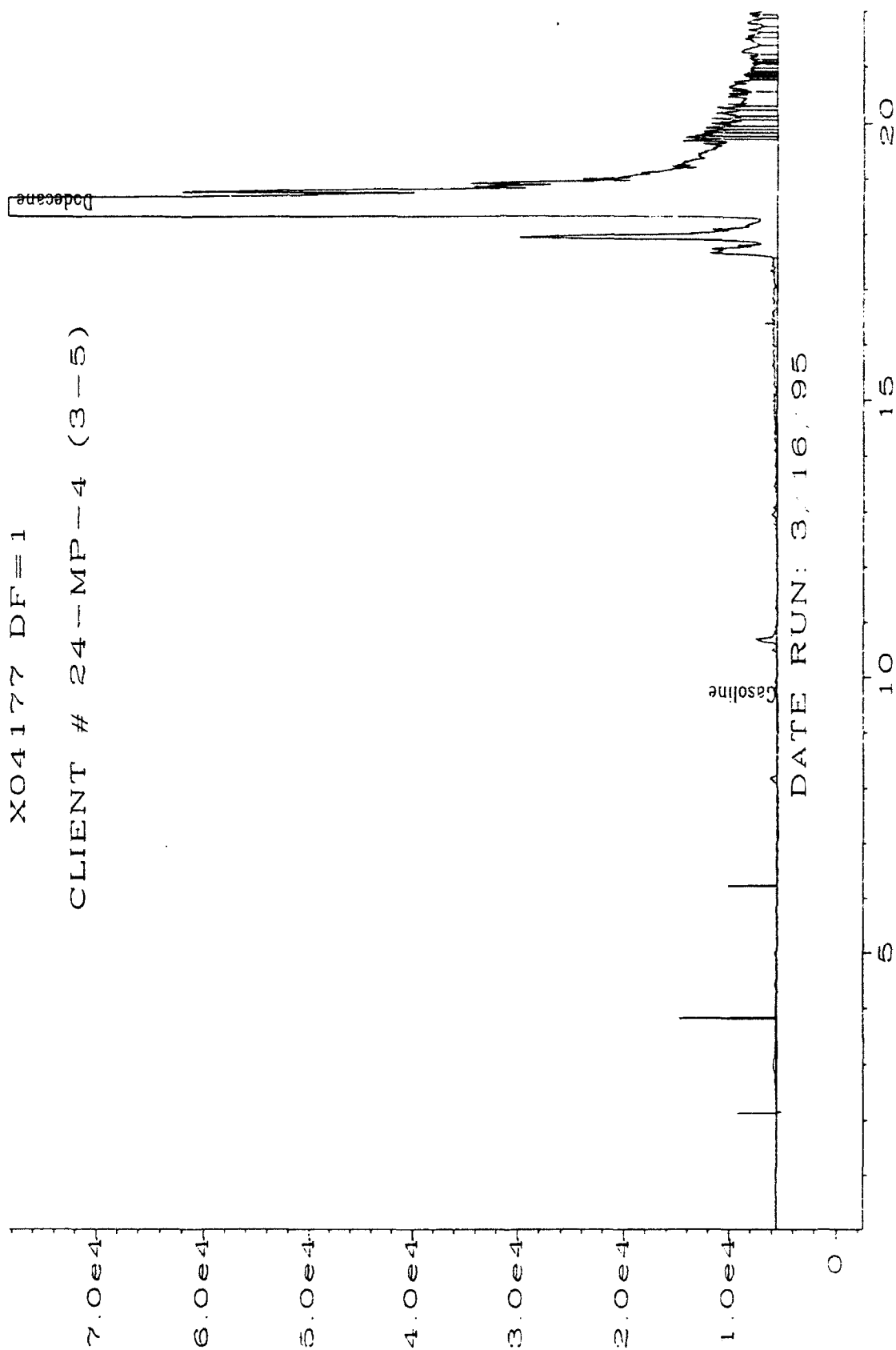
XO4176 DF=1
CLIENT # 24 MP-3 (3-5)



Sig. 1 in C:\HPCHEM\1\DATA\TVH0316\015F0101.D

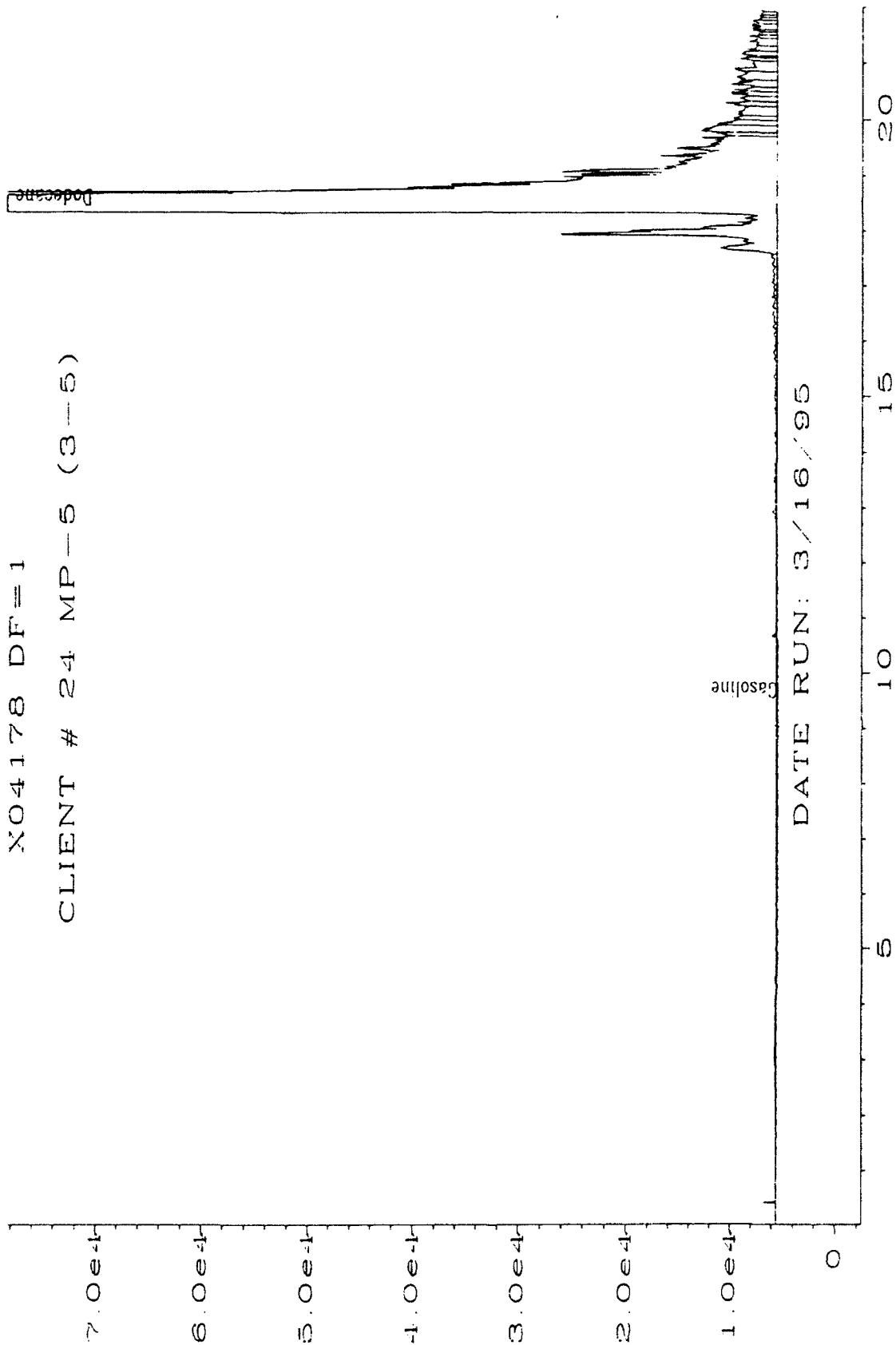
X04177 DF=1

CLIENT # 24-MP-4 (3-5)



Sig. 1 in C:\NHPCHEM\1\DATA\TVH0316\016F0101.D

X04178 DF=1
CLIENT # 24 MP-5 (3-5)



Sig. 1 in C:\NHP\CHEM\1\DATA\TVH0316\017F0101.D

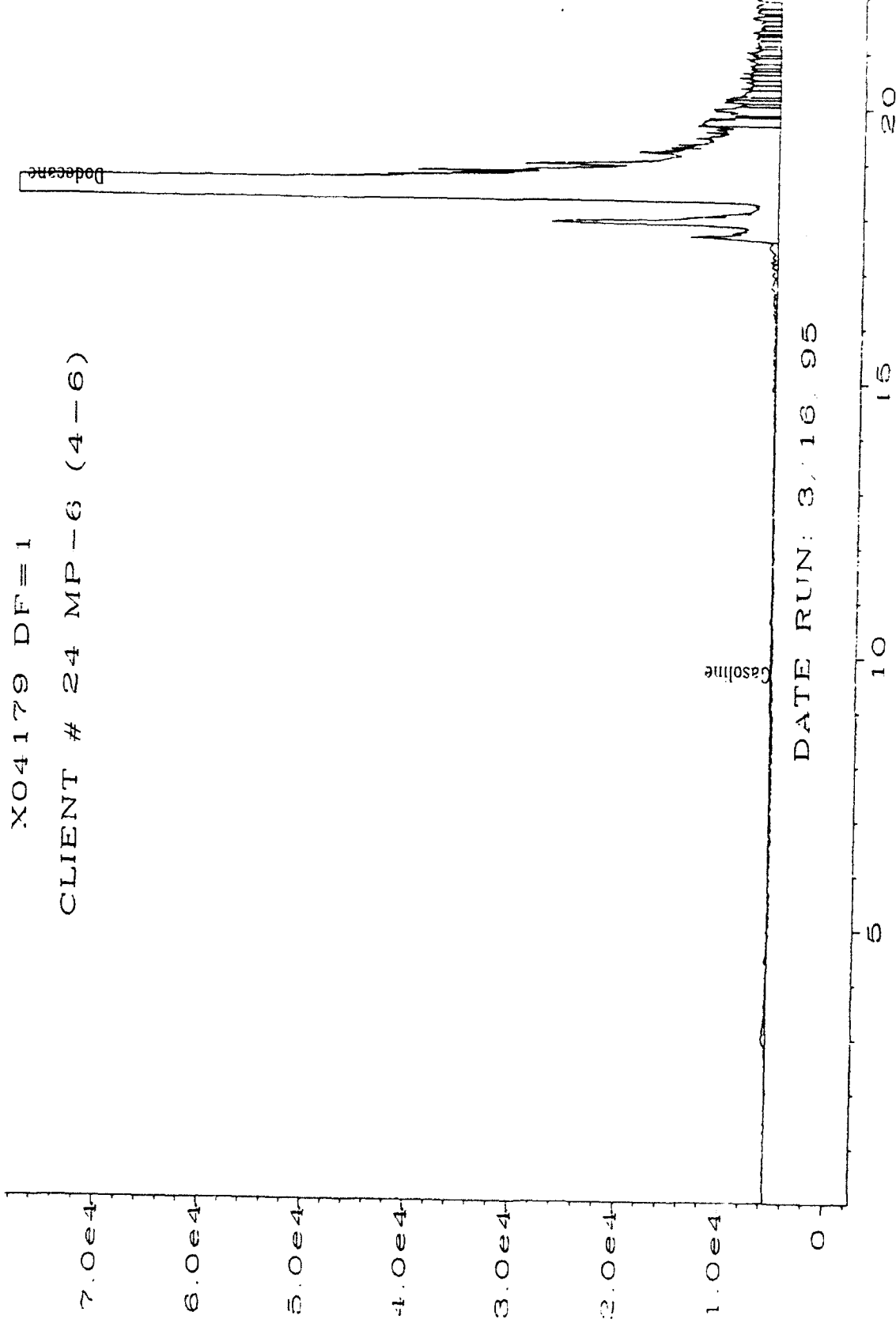
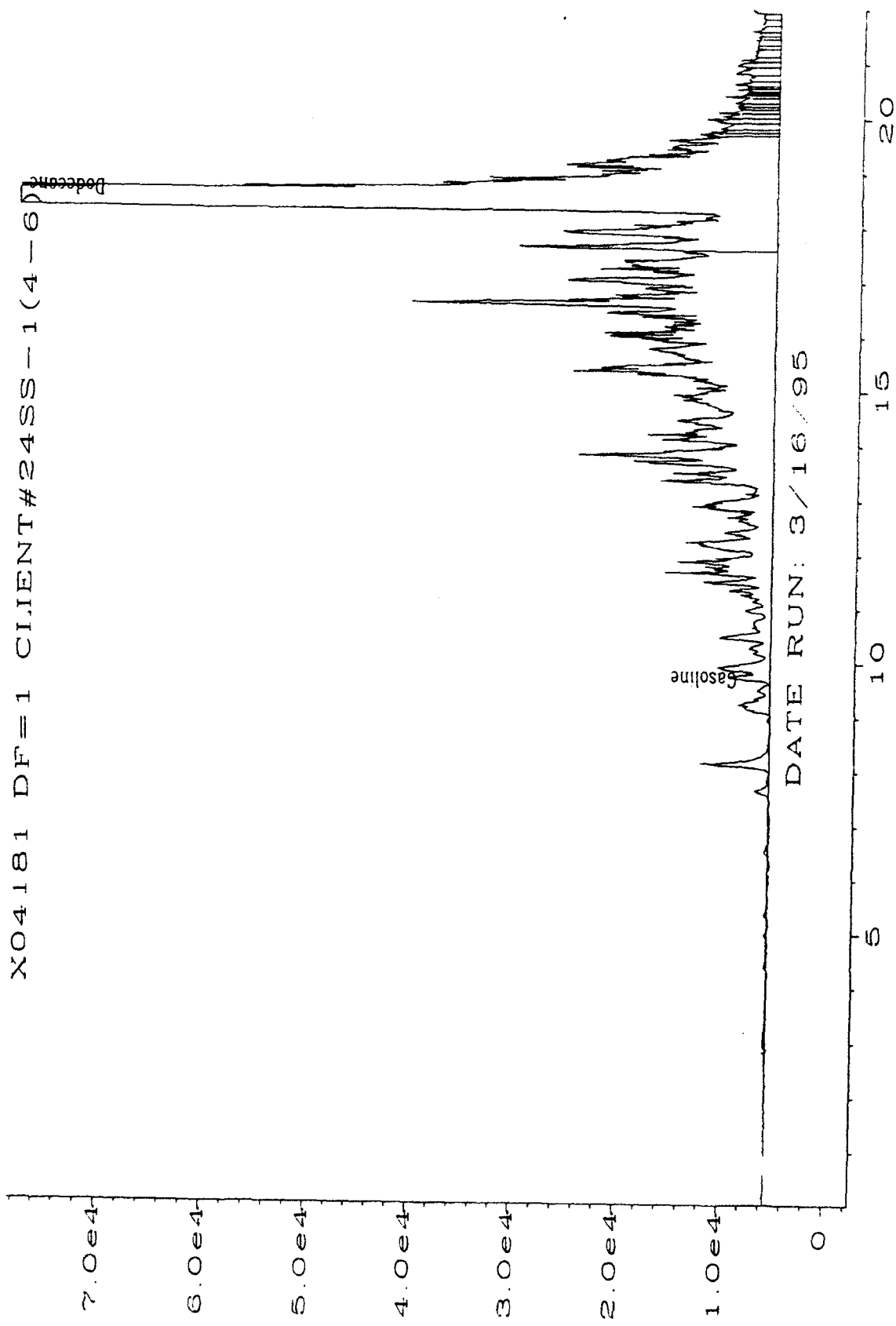
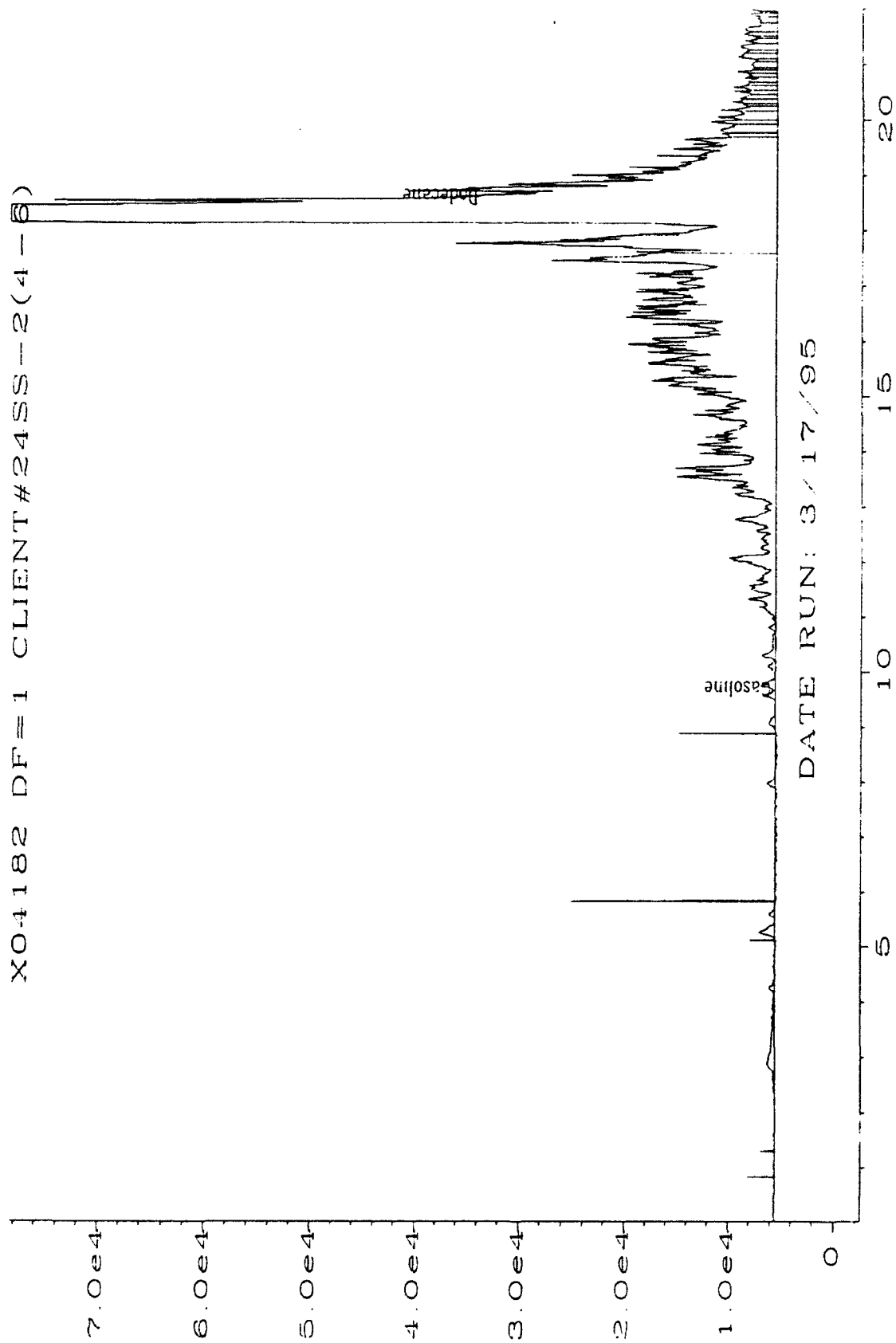


Fig. 1 in C:\HPCHEM\N\DATA\T\H0316 018F0101.D



Sig. 1 in C:\NHPCHEM\1\DATA\TVH0316\019F0101.D

XO4182 DF=1 CLIENT#24SS-2(4-5)



Sig. 1 in CNHPCHEM\INDATA\TVH0316\029F0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS031695 Client Project Number : 722450.21020/MACDILL AFB
Date Prepared : 3/16/95 Lab Project Number : 95-0820
Date Analyzed : 3/16/95 Matrix : SOIL
Sequence Number : TVH12 Method Number : 5030/8015 MOD.

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/L</u>	<u>QC Limit mg/L</u>
Gasoline	5.00	6.21	3.5-6.5


QUALIFIERS

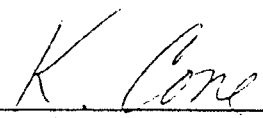
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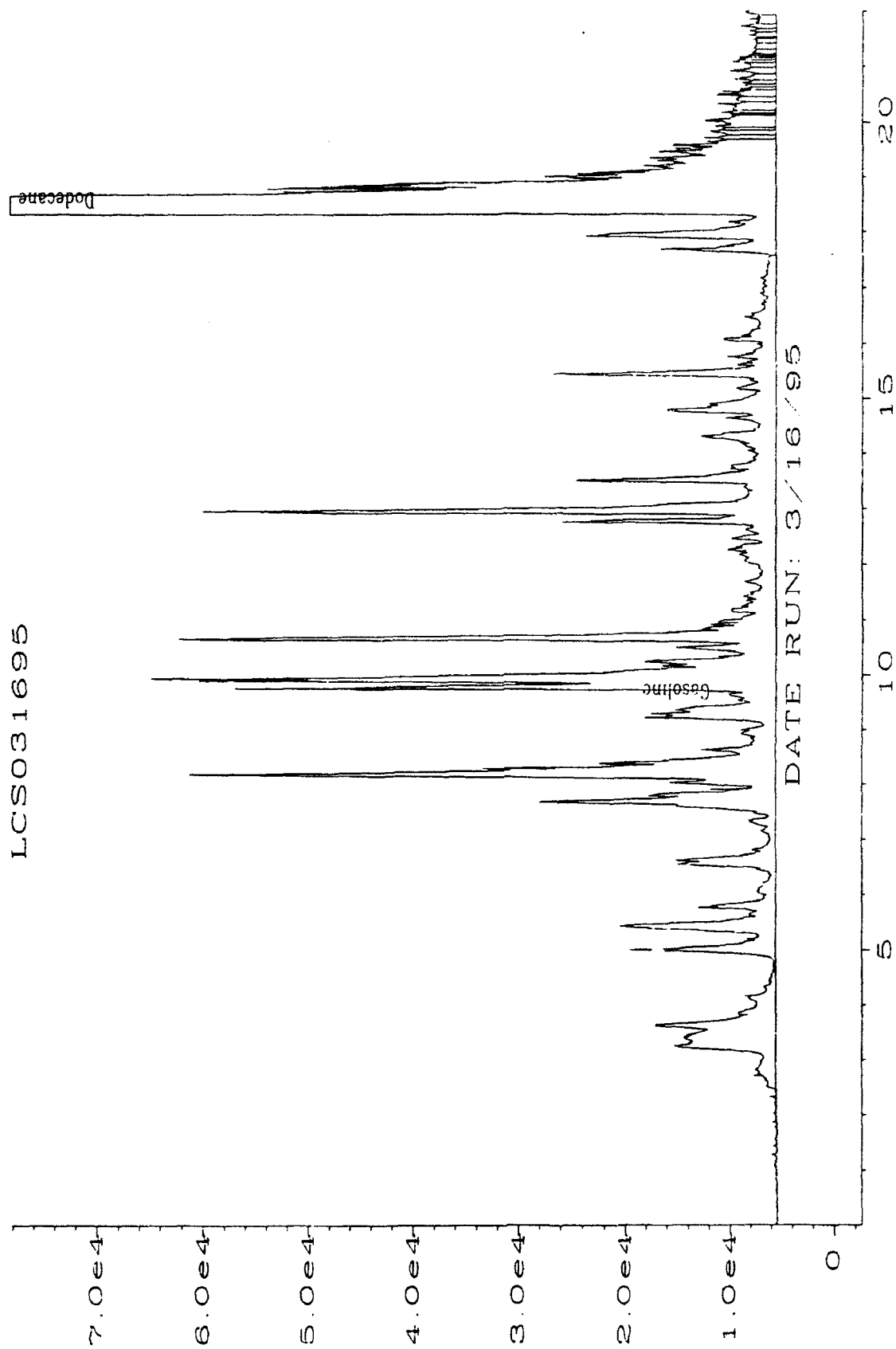
B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.

I 
Analyst


Approved



Sig. 1 in C:\NHP\CHEM\1\DATA\TVH0316\012F0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS032395 Client Project Number : 722450.21020/MACDILL AFB
Date Prepared : 3/23/95 Lab Project Number : 95-0820
Date Analyzed : 3/23/95 Matrix : SOIL
Sequence Number : TVH3 Method Number : 5030/8015 MCD.

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>QC Limit mg/L</u>
Gasoline	5.00	3.92	3.5-6.5


QUALIFIERS

U = TEH analyzed for but not detected.

B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

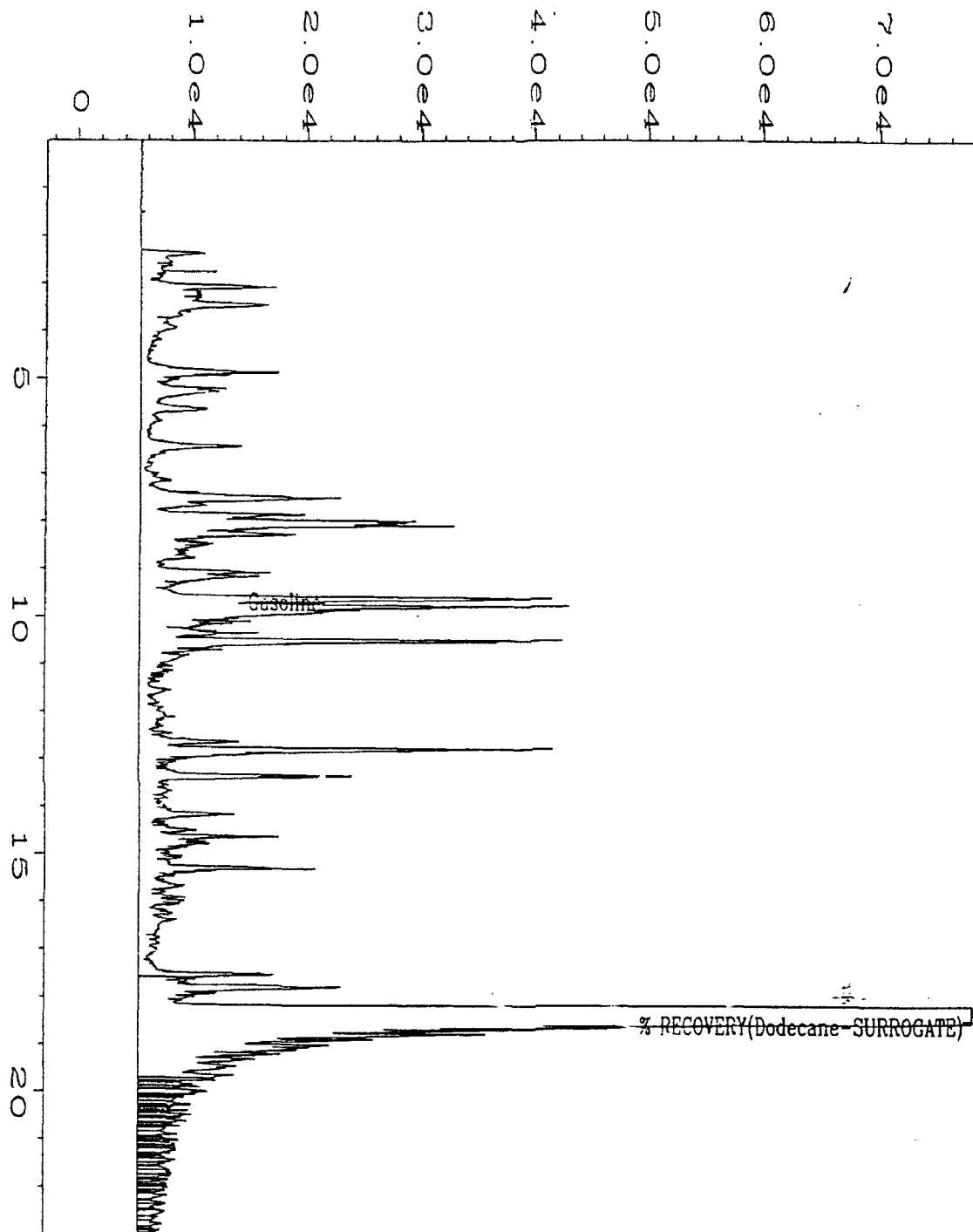
NA = Not Available.



Analyst



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Data File Name	: C:\HPCHEM\1\DATA\tvh0323\003F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 3
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS032395	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH0323.MTH
Acquired on	: 23 Mar 95 07:20 PM	Analysis Method	: TVH0323.MTH
Report Created on	: 23 Mar 95 07:44 PM	Sample Amount	: 0
Last Recalib on	: 23 MAR 95 12:18 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Jet Fuel Boiling Range

Date Sampled : 3/8,9,10,13/95 Client Project Number : 722450.21020/MAC DILL
Date Received : 3/14/95
Date Prepared : 3/15,17/95 Lab Project Number : 95-0820
Date Analyzed : 3/18-20,22/95 Matrix : SOIL
Method Number : 3500/MOD.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH * mg/Kg	MDL mg/Kg
SB031595	SOIL METHOD BLANK	81%	U	10
SB031795	SOIL METHOD BLANK	77%	U	10
X04173	24 MP-1A(3'-4')	87%	U	11
X04174	24 MP-1B(8'-9')	84%	140	12
X04175	24 MP-2 (3'-4')	89%	11	11
X04176	24 MP-3 (3-5)	85%	U	11
X04177	24 MP-4 (3-5)	85%	U	11
X04178	24 MP-5 (3-5)	85%	U	12
X04179	24 MP-6 (4-6)	83%	U	12
X04181	24SS-1 (4-6)	90%	210	12
X04182	24SS-2(4-6)	80%	32	12
X04183	75SS-1 (3-5)	79%	13	12
X04185	75SS-2(3-5)	**	15000	550
X04186	75SS-2(9-11)	78%	16	12
X04186 DUP	75SS-2(9-11)	86%	U	12

** = Unable to separate surrogate from analyte.

* = Sample and MDL values are reported on a dry weight basis.

QUALIFIERS

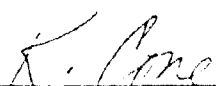
U = TEH analyzed for but not detected.

B = TEH found in blank as well as sample (blank data should be compared).

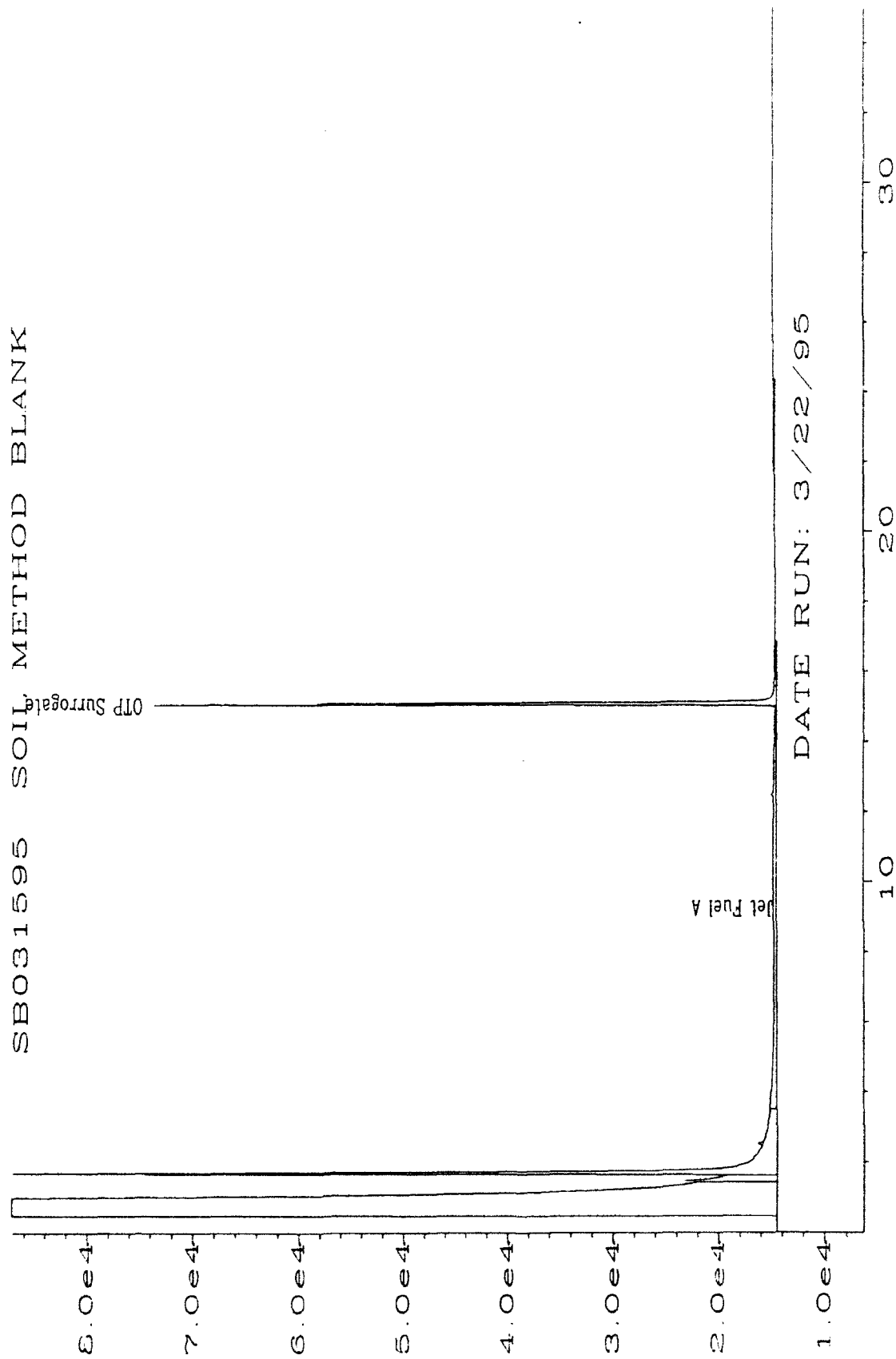
E = Extrapolated value.

MDL = Method Detection Limit


Analyst

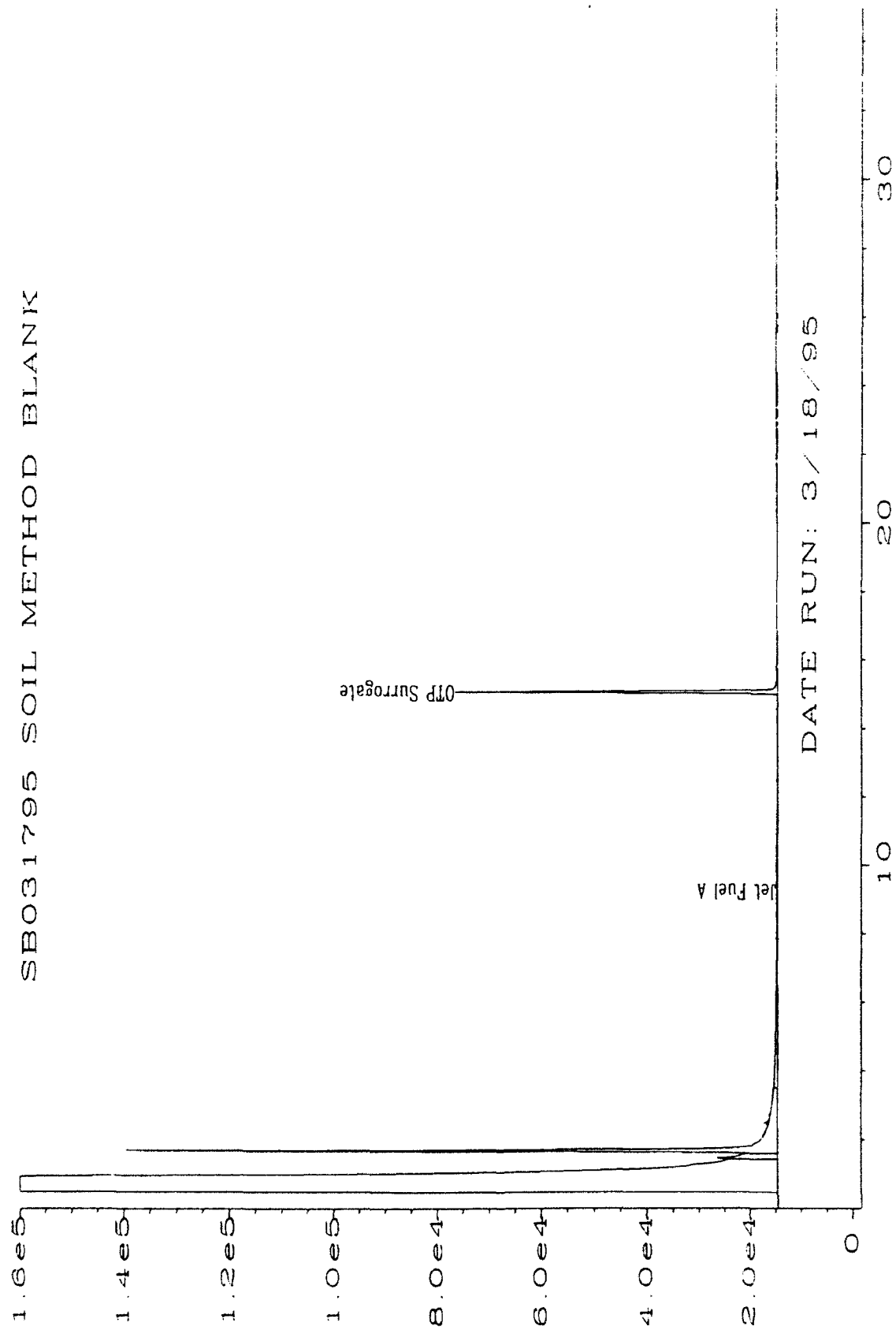

Approved

SB031595 SOIL METHOD BLANK



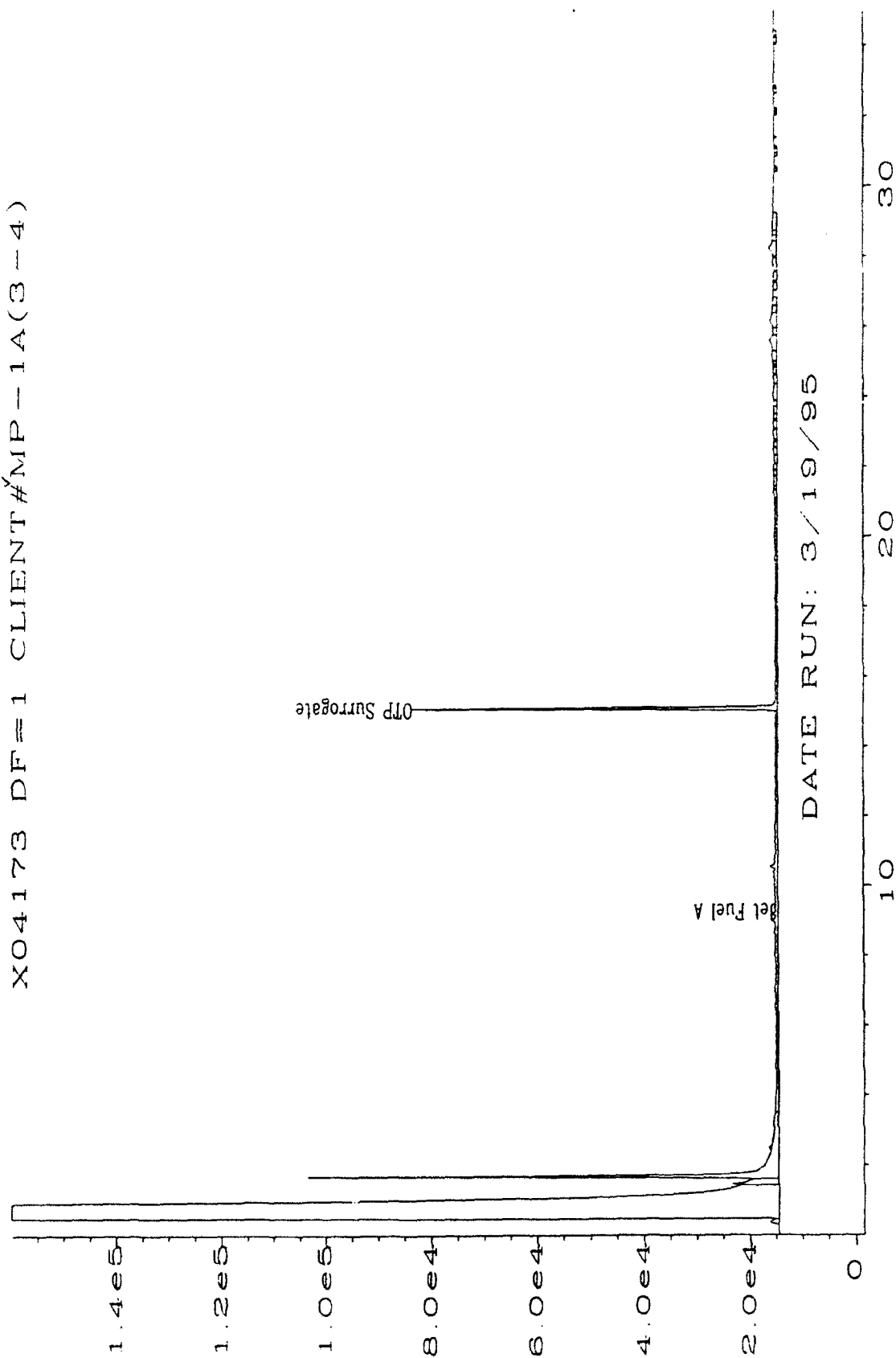
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SB031795 SOIL METHOD BLANK



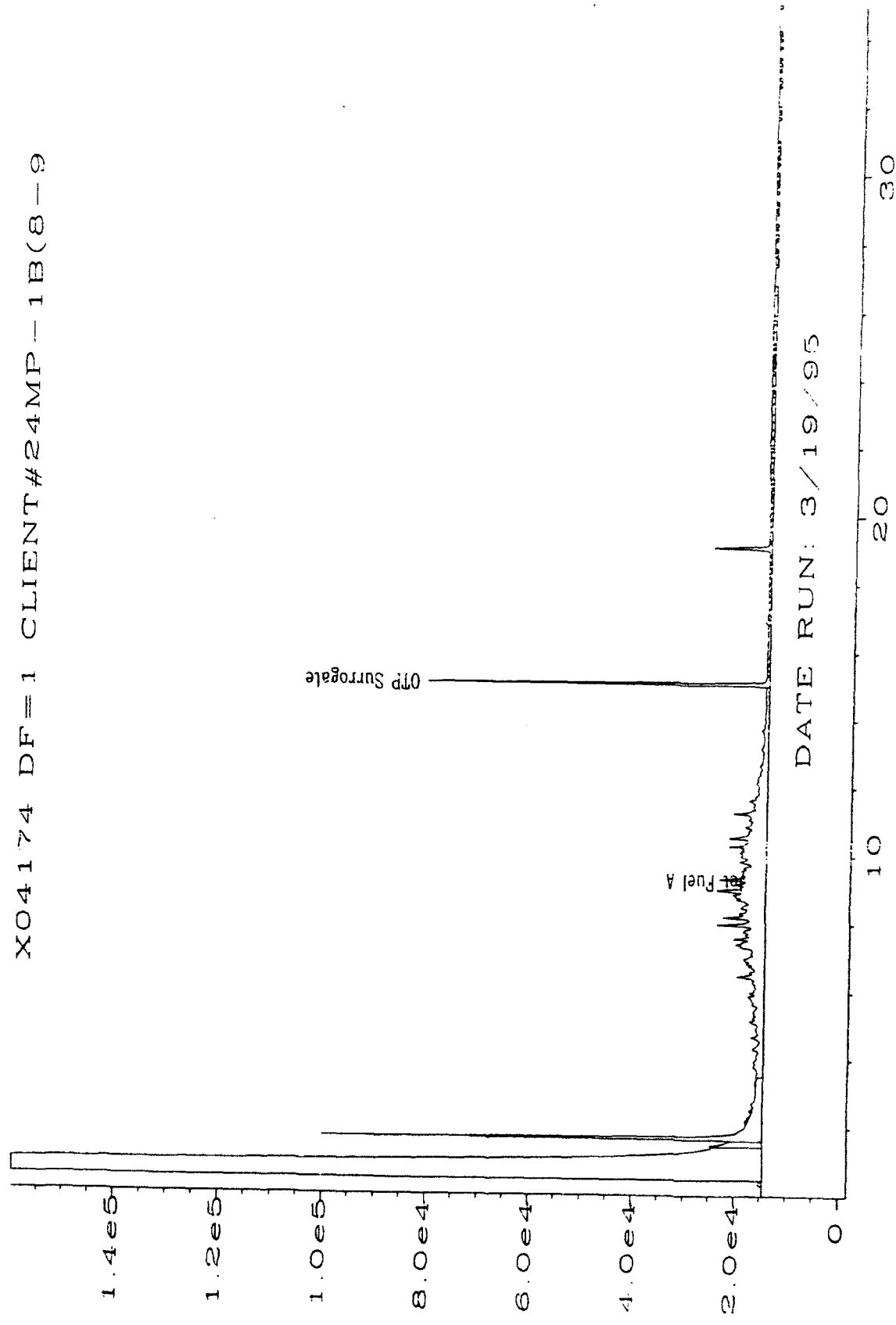
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24
X04173 DF=1 CLIENT#MP-1A(3-4)



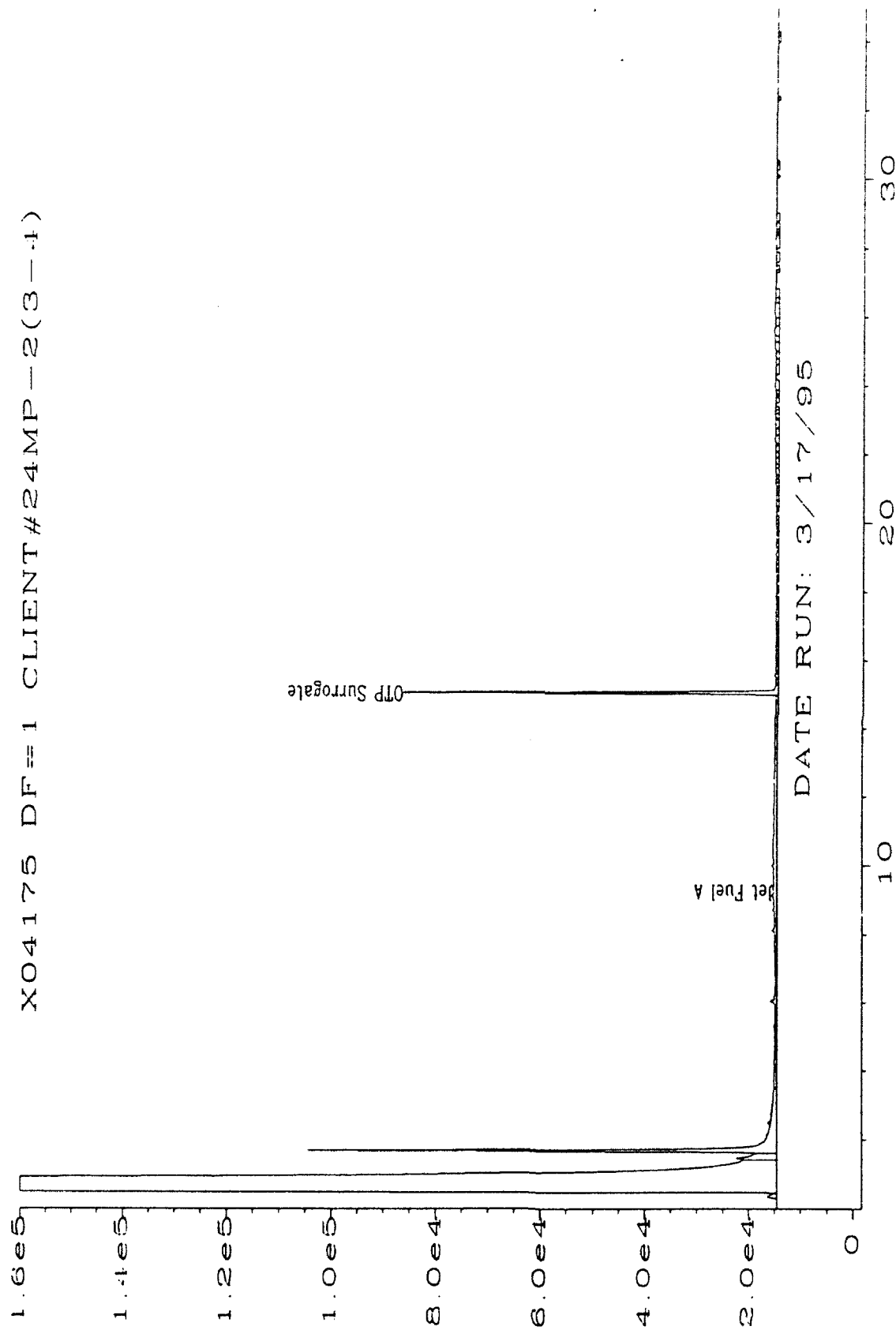
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XO4174 DF=1 CLIENT#24MP-1B(8-9



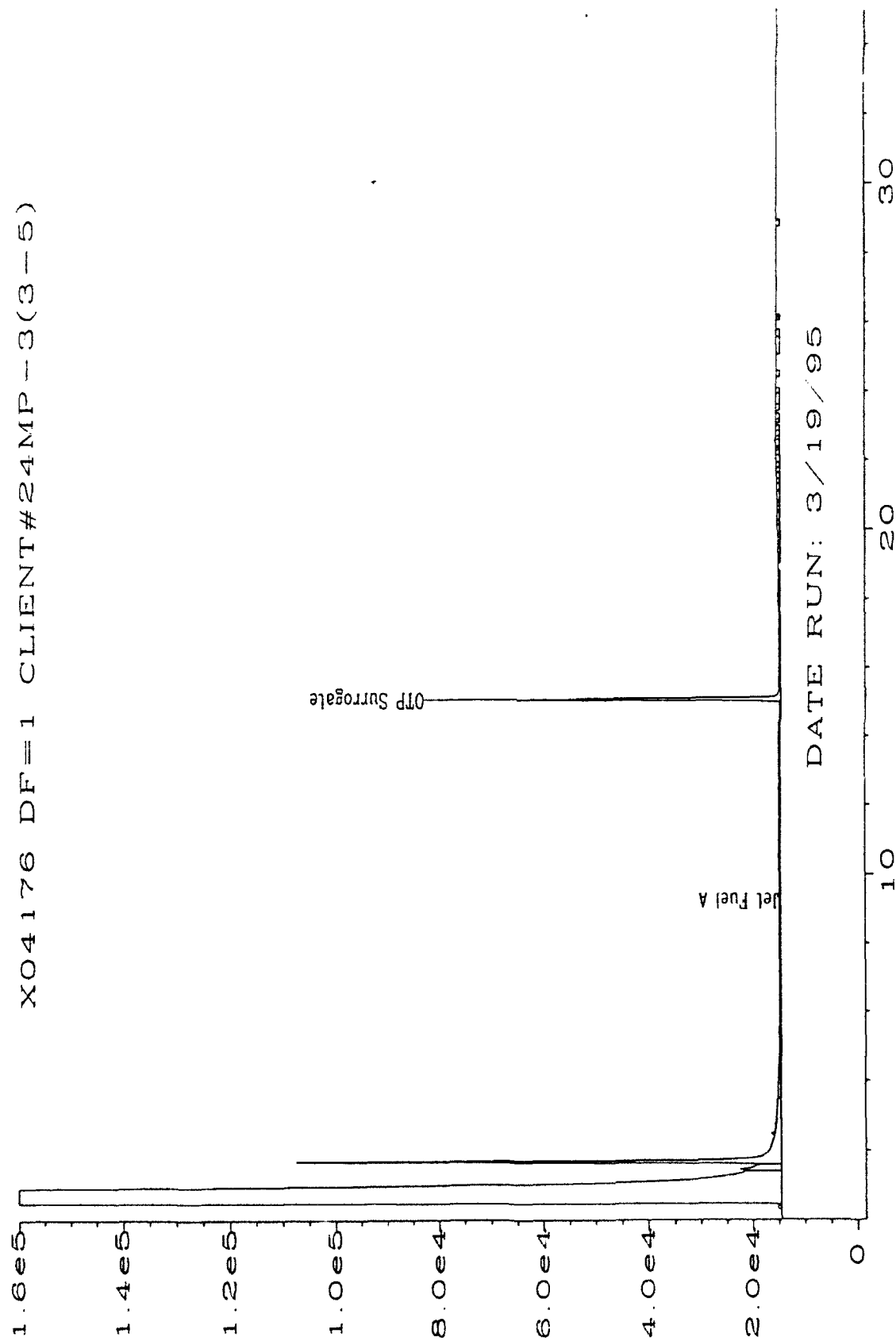
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X04175 DF=1 CLIENT #24MP-2(3-4)



Sig. 2 in C:\HPCHEM\2\DATA\TEH0317\055R0101.D

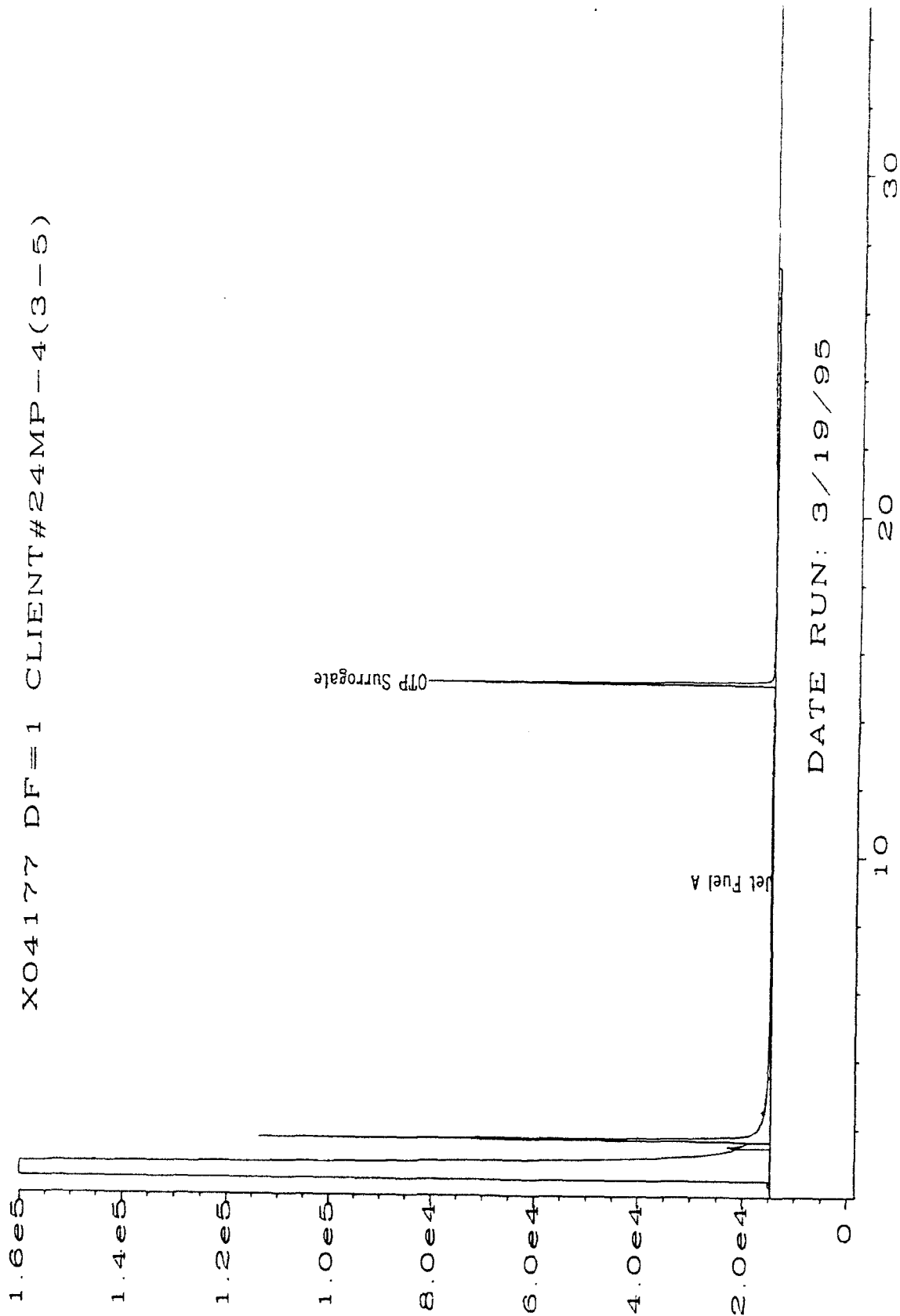
X04176 DF=1 CLIENT#24MP-3(3-5)



DATE RUN: 3/19/95

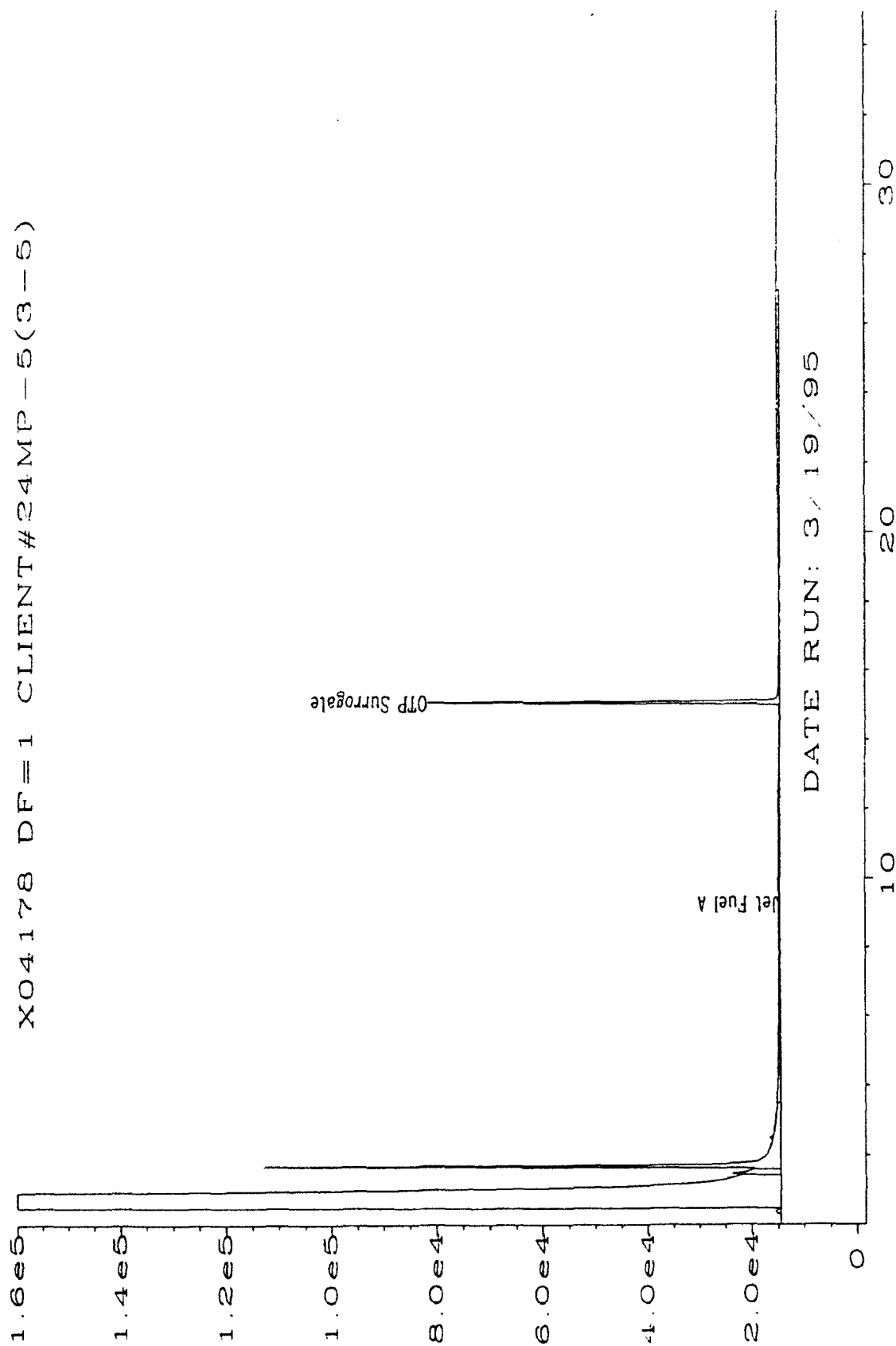
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X04177 DF=1 CLIENT#24MP-4(3-5)



Sig. 2 in C:\HPCHEM\2\DATA\TEH0317\057R0101.D

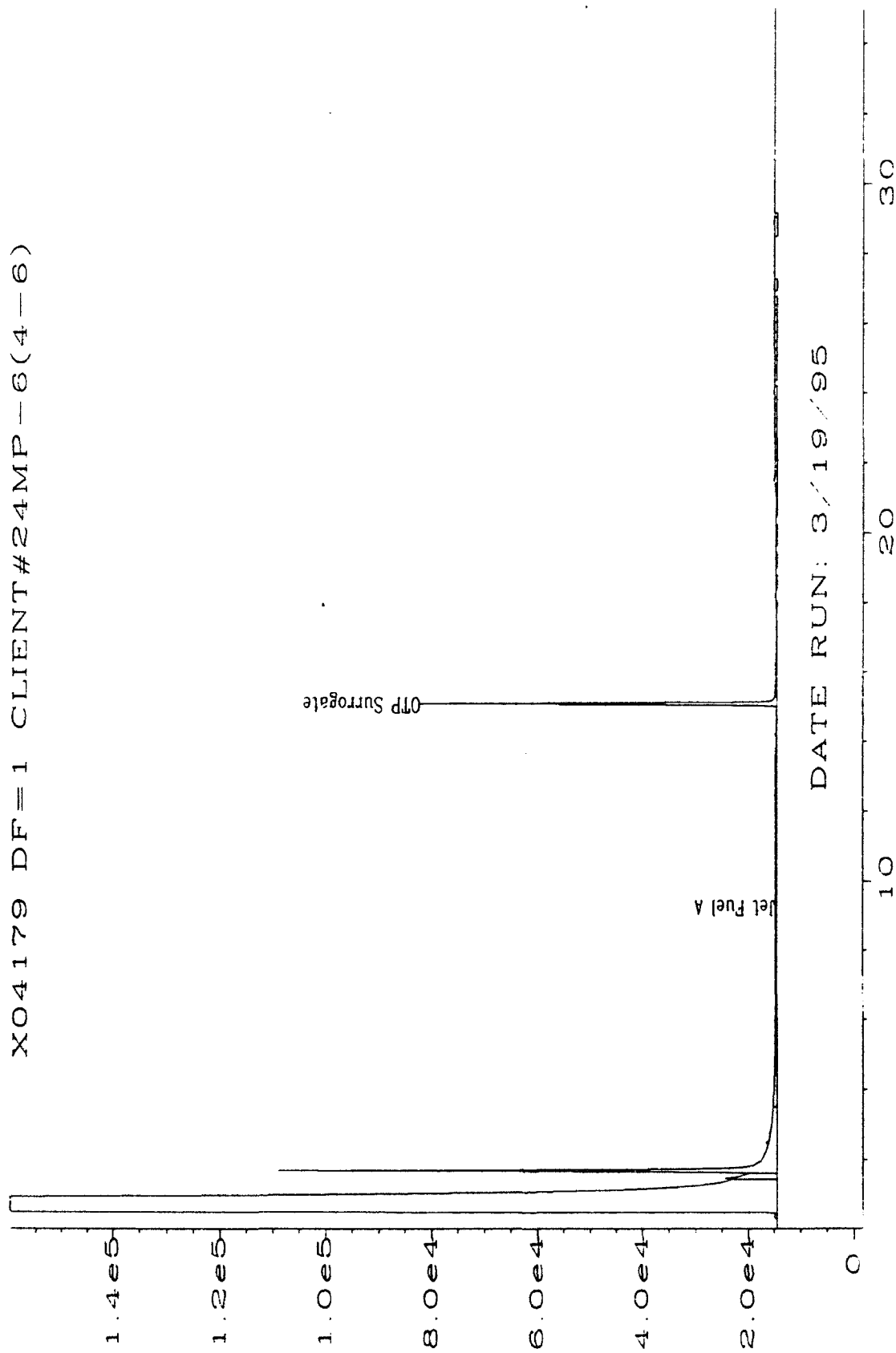
X04178 DF=1 CLIENT#24MP-5(3-5)



DATE RUN: 3/19/95

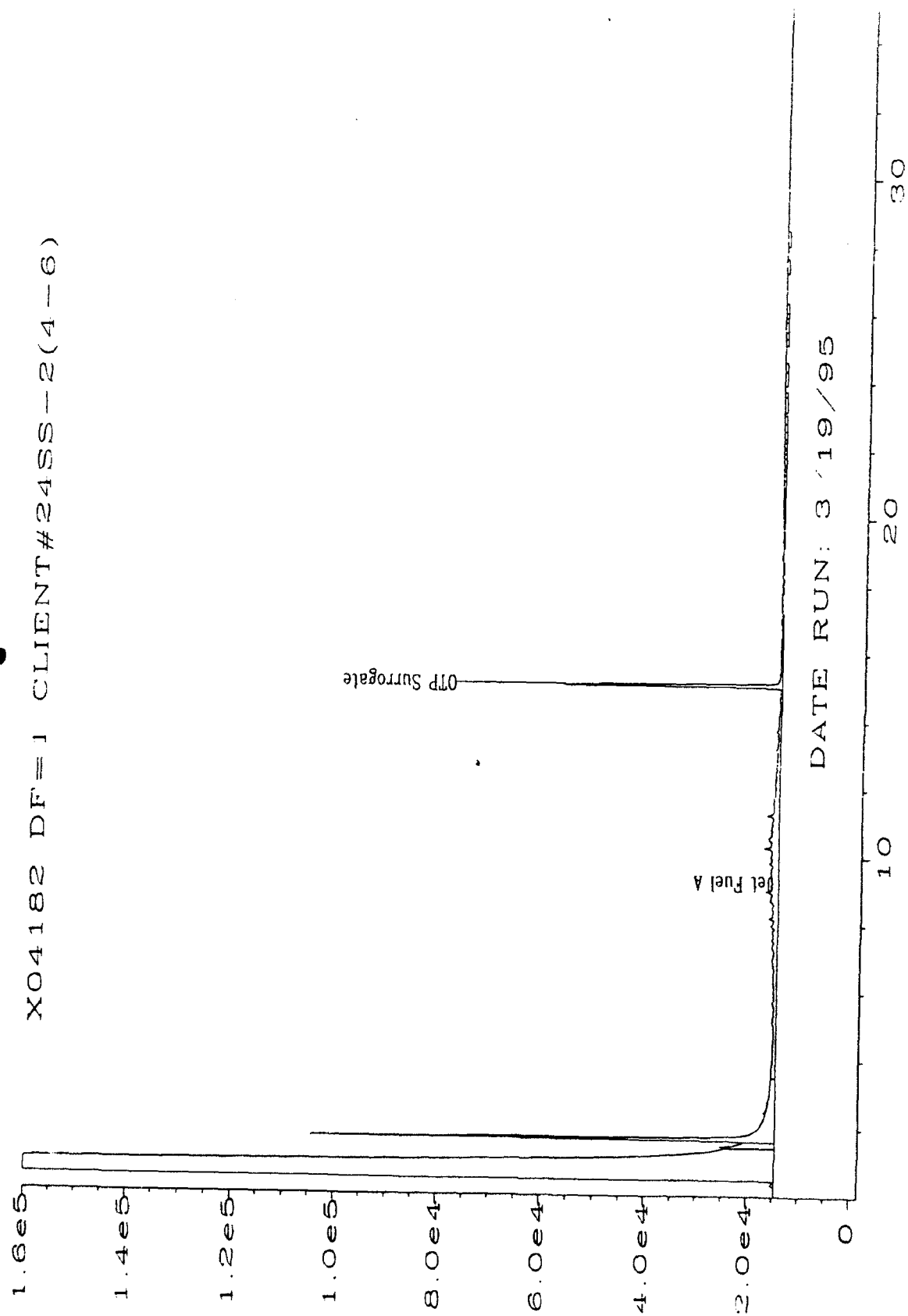
Sig. 2 in C:\HPCHEM\2\DATA\TEH0317\059R0101.D

X04179 DF=1 CLIENT#24MP-6(4-6)



Sig. 2 in C:\HPCHEM\2\DATA\TEH0317060R0101.D

X04182 DF=1 CLIENT#24SS-2(4-6)



Sig 2 in C:\HPCHEM 2\DATA\TEHO317\062R0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number : LCS031595 Client Project Number : 722450.21020/MAC DILL
Date Prepared : 3/15/95 Lab Project Number : 95-0820
Date Analyzed : 3/18/95 Matrix : SOIL
Sequence Number : TEH21 Method Number : 3500/Mod. 8015

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/Kg</u>	<u>QC Limit mg/Kg</u>
JET FUEL	1000	960	750-1750


QUALIFIERS

U = TEH analyzed for but not detected.

B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.

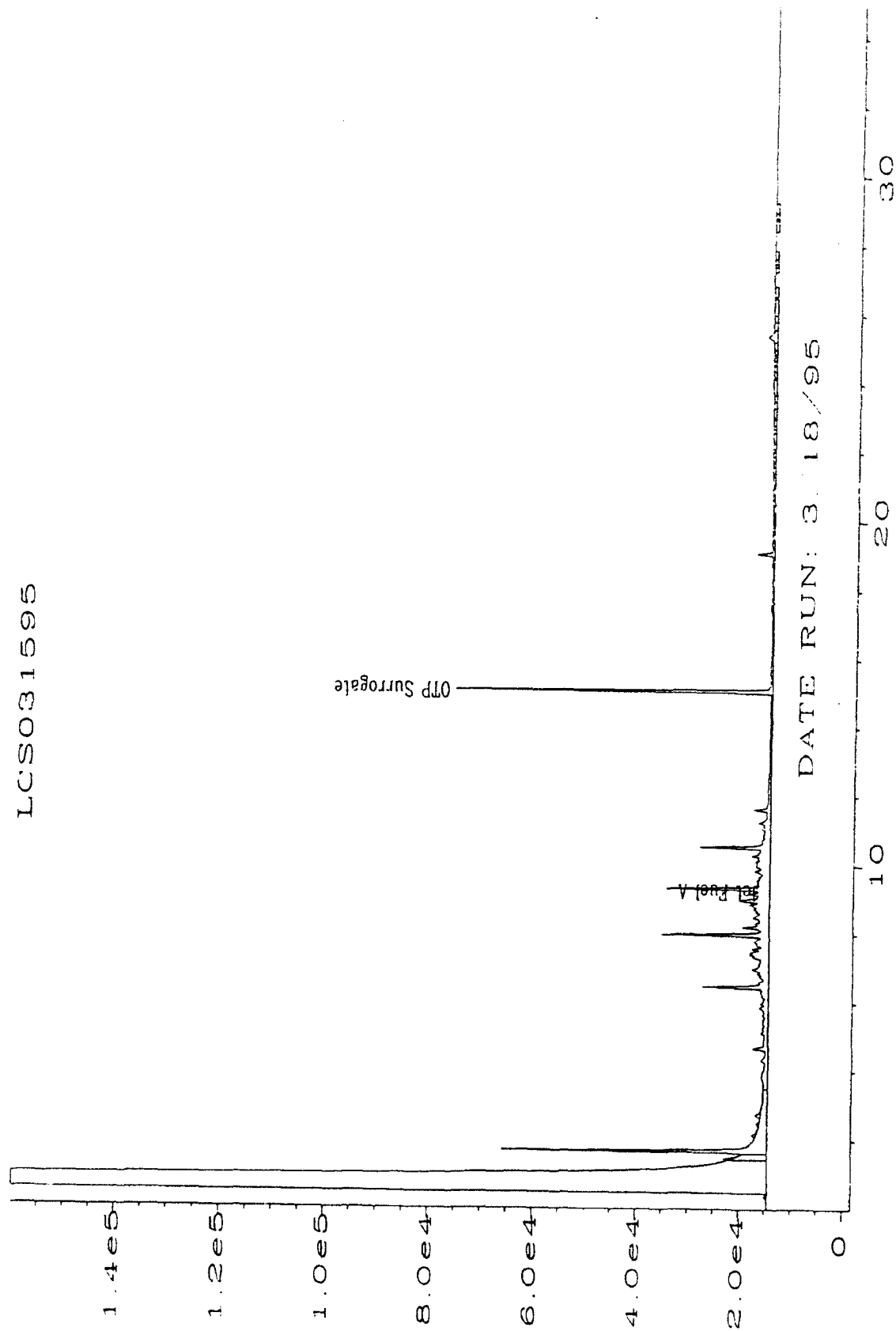


Analyst



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LC5031595



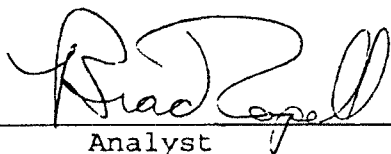
Sig. 2 in C:\HPCHEM\2\DATA\TEH0317\021R0101.D

1
EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

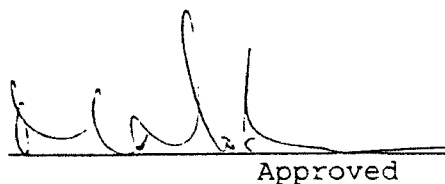
Miscellaneous Analyses

Date Sampled : 3/8-13/95 Client Project ID. : 722450.21020
Date Received : 3/14/95 Lab Project No. : 95-0820
Date Prepared : 3/15/95 Matrix : Soil
Date Analyzed : 3/15/95 Method : EPA 160.3

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Moisture (%)</u>
X04173	24MP-1A (3'-4')	10.1
X04174	24MP-1B (8'-9')	16.8
X04175	24MP-2 (3'-4')	16.1
X04176	24MP-3 (3-5)	14.6
X04177	24MP-4 (3-5)	14.8
X04178	24MP-5 (3-5)	17.5
X04179	24MP-6 (4-6)	17.6
X04181	24SS-1 (4-6)	16.0
X04182	24SS-2 (4-6)	13.7
X04183	75SS-1 (3-5)	16.7
X04185	75SS-2 (3-5)	11.3
X04186	75SS-2 (9-11)	18.0



Analyst



Approved

HUFFMAN

LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

ION-CLP ANALYSIS RESULTS

Date: 03/24/95
 Lab Name: Huffman Labs Client: Evergreen Analytical
 Contact: Sue Zeller Contact: Patty McClellan
 Sample Matrix: soil Huffman Lab #: 143595

Client Smp#	Lab ID #	Element/ Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Instrument ID
75SS-4 (3-4)	14359501	TC	NA	<0.05	%	NA	03/23/95	2.195	Leco CR12	#7
75SS-4 (3-4)	14359501	TC	NA	<0.05	%	NA	03/23/95	2.067	Leco CR12	#7
75SS-6 (3-5)	14359502	TC	NA	<0.05	%	NA	03/23/95	2.154	Leco CR12	#7
75MP-7 (4-6)	14359503	TC	NA	<0.05	%	NA	03/23/95	3.332	Leco CR12	#7
75MP-17 (4-6)	14359504	TC	NA	<0.05	%	NA	03/23/95	2.888	Leco CR12	#7
24MP-7 (2-4)	14359505	TC	NA	<0.05	%	NA	03/23/95	3.555	Leco CR12	#7
24MP-3 (3-5)	14359506	TC	NA	0.21	%	NA	03/23/95	3.331	Leco CR12	#7
24MP-4 (3-5)	14359507	TC	NA	0.13	%	NA	03/23/95	2.908	Leco CR12	#7
24MP-6 (4-6)	14359508	TC	NA	2.21	%	NA	03/23/95	3.093	Leco CR12	#7
24MP-16 (4-6)	14359509	TC	NA	0.73	%	NA	03/23/95	3.394	Leco CR12	#7
75SS-4 (3-4)	14359501	CC	NA	<0.02	%	NA	03/21/95	0.111	COU-02	"tower"
75SS-4 (3-4)	14359501	CC	NA	<0.02	%	NA	03/21/95	0.259	COU-02	"tower"
75SS-6 (3-5)	14359502	CC	NA	<0.02	%	NA	03/21/95	0.185	COU-02	"tower"
75MP-7 (4-6)	14359503	CC	NA	<0.02	%	NA	03/21/95	0.248	COU-02	"tower"
75MP-17 (4-6)	14359504	CC	NA	<0.02	%	NA	03/21/95	0.221	COU-02	"tower"
24MP-7 (2-4)	14359505	CC	NA	<0.02	%	NA	03/21/95	0.127	COU-02	"tower"
24MP-3 (3-5)	14359506	CC	NA	<0.02	%	NA	03/21/95	0.130	COU-02	"tower"
24MP-4 (3-5)	14359507	CC	NA	<0.02	%	NA	03/21/95	0.128	COU-02	"tower"
24MP-6 (4-6)	14359508	CC	NA	<0.02	%	NA	03/21/95	0.138	COU-02	"tower"
24MP-16 (4-6)	14359509	CC	NA	<0.02	%	NA	03/21/95	0.165	COU-02	"tower"
</										

Samples analyzed and results reported on an as received basis.

Soil samples are not homogeneous.

Values reported below Detection Limits are for reference only.

TC detection limit = 0.05 %

CC detection limit = 0.02 %

TOC detection limit = 0.05 %

Numbers to the left above represent the last four digits of the EAL project number under which the samples were analyzed.

The original report and quality control results are filed with EAL project 95-0819.



CASE NARRATIVE

Evergreen Analytical Project (EAL) #: 95-0819

Parsons Engineering Science, Inc. (PES) Project: MacDill AFB
(722450.21020)

Sample Receipt

On March 13, 1995, eight soil samples and one Rinseate Blank were received in good condition at Evergreen Analytical Laboratory. Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

BTEX, Chlorobenzene, 1,3,5-trimethylbenzene (TMB), 1,2,4-TMB, 1,2,3-TMB, and 1,2,3,4-Tetramethylbenzene (TEMB), hereafter referred to as BTEX.

BTEX, Soil Matrix, Method SW8020

There were no quality control anomalies to report.

PES sample number 24MP-8(2-4) and 24MW-6(2-4) were analyzed at a dilution due to the inability to purge at DF=1. The reporting limits were raised accordingly.

Total Volatile Hydrocarbon (TVH), Soil Matrix, Method 8015M

There were no quality control anomalies to report.

Total Extractable Hydrocarbons, (TEH), Soil Matrix, Method 8015M, JET-A.

There were no laboratory duplicates, matrix spike or matrix spike duplicate samples analyzed with this batch due to insufficient sample volume. There were no other quality control anomalies to report.

Total Organic Carbon in Soil

Total Organic Carbon (TOC) in Soil was analyzed by Huffman Research, Inc. of Golden, Colorado. TOC was determined by analyzing for total carbon (TC) and inorganic (carbonate) carbon (CC), then calculating the difference as TOC. The report from Huffman is included.


Patricia A. McClellan, Project Manager

Evergreen Analytical Sample Log Sheet

Project # 95-0819

Date(s) Sampled: 03/10,11/95 COC

Date Due: 03/17/95

Date Received: 03/14/95 1000

Holding Time(s): 03/24,25-BTEX,TVH

Client Project I.D. 722450.21020/MAC DILL

Rush STANDARD

Client: Parsons Engineering Science, Inc.

Shipping Charges N/A

Address: 1700 Broadway Suite 900

E.A. Cooler # 422

Denver, CO 80290

Airbill # 9581826225 FEDEX

Contact: TODD WIEDEMEIER

Custody Seal Intact? Y

Client P.O. _____

Cooler X Bottles _____

Phone #831-8100 Fax #831-8208

COC Present Y

Sample Tags Present? Y

Sample Tags Listed? Y

Sample(s) Sealed? Y

Special Invoicing/Billing _____

Special Instructions REPORT SOILS ON A DRY WEIGHT BASIS. \$PLUS TMB, TMB AND CHLOROBENZENE. ANALYZE AN MS/MSD AND LAB DUPLICATE ON THIS CLIENT'S SAMPLES.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04163A/B	24MP-7(2-4)	SBTEX 8020	S	2WM	2
X 4164A/B	24MP-8(2-4)	SBTEX 8020	S	2WM	2
X04165A/B	24MP-9(3-5)	SBTEX 8020	S	2WM	2
X04166A/B	24MP-9(9-11)	SBTEX 8020	S	2WM	2
X04167A/B	24MP-10(2-4)	SBTEX 8020	S	2WM	2
X04168A/B	24MW-6(2-4)	SBTEX 8020	S	2WM	2
X04169A/B	24MW-6(9-11)	SBTEX 8020	S	2WM	2
X04170A/B	175MP-1(3-5)	SBTEX 8020	S	2WM	2
X04171A/B	RINSATE BLANK	SBTEX 8020	W	40V	2
X04172A/B	TRIP BLANK	SBTEX 8020	W	40V	2
X04163C	24MP-7(2-4)	TVH	S	2WM	2
X04164C	24MP-8(2-4)	TVH	S	2WM	2
X04165C	24MP-9(3-5)	TVH	S	2WM	2
X04166C	24MP-9(9-11)	TVH	S	2WM	2
X04167C	24MP-10(2-4)	TVH	S	2WM	2
X04168C	24MW-6(2-4)	TVH	S	2WM	2
X04169C	24MW-6(9-11)	TVH	S	2WM	2
X04170C	175MP-1(3-5)	TVH	S	2WM	2

R=Sample to be returned

Route GC/MS GC 4 Metals Wet Chem 1 SxPrep 1 Acctg 1
To

SxRec C QA/QC C Sales C File Orig

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
1163D	24MP-7(2-4)	TEH	S	2WM	B2
X04164D	24MP-8(2-4)	TEH	S	2WM	B2
X04165D	24MP-9(3-5)	TEH	S	2WM	B2
X04166D	24MP-9(9-11)	TEH	S	2WM	B2
X04167D	24MP-10(2-4)	TEH	S	2WM	B2
X04168D	24MW-6(2-4)	TEH	S	2WM	B2
X04169D	24MW-6(9-11)	TEH	S	2WM	B2
X04170D	175MP-1(3-5)	TEH	S	2WM	B2
X04163F	24MP-7(2-4)	% MOISTURE	S	4WM	B2
X04164E	24MP-8(2-4)	% MOISTURE	S	4WM	B2
X04165E	24MP-9(3-5)	% MOISTURE	S	4WM	B2
X04166E	24MP-9(9-11)	% MOISTURE	S	4WM	B2
X04167E	24MP-10(2-4)	% MOISTURE	S	4WM	B2
X04168E	24MW-6(2-4)	% MOISTURE	S	4WM	B2
X04169E	24MW-6(9-11)	% MOISTURE	S	4WM	B2
X04170E	175MP-1(3-5)	% MOISTURE	S	4WM	B2
X04163E	24MP-7(2-4)	TOC	S	2WM	OUT

Page 2 of 2 Pages

Project # 95-0819

R=Sample to be returned

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 1700 Broadway Ste 700
CITY Denver STATE CO ZIP 80202
PHONE# 331-3100 FAX#

Sampler Name: Kyle J. Cannon
(signature) Kyle J. Cannon
(print) Kyle L. Cannon
Evergreen Analytical Cooler No. 422
Cooler Received

PRINT

Please all information:

CLIENT SAMPLE IDENTIFICATION DATE SAMPLED TIME

24mp-7 (2-4)	3-10-95	0910	6
24mp-8 (2-4)	3-10-95	1400	5
24mp-9 (3-5)	3-10-95	1600	5
24mp-9 (9-11)	3-10-95	1700	5
24mp-10 (2-4)	3-11-95	0900	5
24mp-6 (2-7)	3-11-95	0930	5
24mp-6 (9-11)	3-11-95	1030	5
24mp-1 (3-5)	3-11-95	1415	5
Residue Blank	3-11-95	1400	1
Tripp Blank			

HT:

DD:

Instructions:

Page 1 of 1
CLIENT CONTACT (print) 1048 W. 1st Ave
PROJECT I.D. 722810.21020 / PARADISE AFB
EAL QUOTE # PO#
TURNAROUND REQUIRED*
*expedited turnaround subject to additional fee

ANALYSIS REQUESTED

MATRIX		ANALYSIS REQUESTED																			EAL Sample No.
No. of Containers	Water/Drinking/Discharge/Ground (circle)	Oil / Sludge	TCLP VOA/BNA/Pes/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pes/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TPH 418.1/Oil & Grease 413.1 (circle)	TPH 8015mod. (Gasoline)	TPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	ICCLF	Moisture				
		Soil / Solid (circle)																			
5	X	X								X	X	X	X			X	X			X04163	
5	X	X								X	X	X	X			X	X			64	
5	X	X								X	X	X	X			X	X			65	
5	X	X								X	X	X	X			X	X			66	
5	X	X								X	X	X	X			X	X			67	
5	X	X								X	X	X	X			X	X			68	
5	X	X								X	X	X	X			X	X			69	
5	X	X								X	X	X	X			X	X			70	
1	X	X								X	X	X	X			X	X			71	
										X	X	X	X							72	
																				Location 2, B2	
																				Container Size	

Signature/Stamp/Date/Time (Signature) Date/Time Received by (Signature)

Evergreen Analytical Sample Receipt/Check-in Record

Date & Time Rec'd: 3/14/95 10:00 Shipped Via: FedEx 958120600

Client: PARSONS.ES (Airbill # if applicable)

Client Project ID(s): 722450.21020 | MAC Div AFB

EAL Project #(s): 95-0819 EAL Cooler(s): Y N

Cooler# 122

Ice packs (Y) N Y N Y N Y N Y N

Temperature °C 10

- | | Y | N | N/A |
|--|----------|----------|----------|
| 1. Custody seal(s) present: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| Seals on cooler intact | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| Seals on bottle intact | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| 2. Chain of Custody present: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| 3. Containers broken or leaking: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| (Comment on COC if Y) | | | |
| 4. Containers labeled: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| 5. COC agrees w/ bottles received: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| (Comment on COC if N) | | | |
| 6. COC agrees w/ labels: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| (Comment on COC if N) | | | |
| 7. Headspace in VOA vials-waters only | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| (comment on COC if Y) | | | |
| 8. VOA samples preserved: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| 9. pH measured on metals, cyanide or phenolics*: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| List discrepancies | | | |
| *Non-EAL provided containers only, water samples only. | | | |
| 10. Metal samples present: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| Total _____, Dissolved _____ | | | |
| D or PD to be filtered: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| T,TR,D,PD to be Preserved: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| 11. Short holding times: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| Specify parameters | | | |
| 12. Multi-phase sample(s) present: | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| 13. COC signed w/ date/time: | <u>✓</u> | <u>✓</u> | <u>✓</u> |

Comments: _____

(Additional comments on back)

Custodian Signature/Date: Linda Woods 3/14/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-7(2-4)	Client Project No.	: 722450.21020
Lab Sample Number	: X04163		MacDill
Date Sampled	: 3/10/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/16/95	Method	: 8020
Date Analyzed	: 3/16/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031614
		Method Blank No.	: MB031695

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.8
Toluene	108-88-3	U	4.8
Ethyl Benzene	100-41-4	U	4.8
Total Xylene	1330-20-7	U	4.8
Chlorobenzene	108-90-7	U	4.8
1,3,5-trimethylbenzene	108-67-8	U	4.8
1,2,4-trimethylbenzene	95-63-6	U	4.8
1,2,3-trimethylbenzene	526-73-8	U	4.8
1,2,3,4-tetramethylbenzene	488-23-3	U	4.3

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 90%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

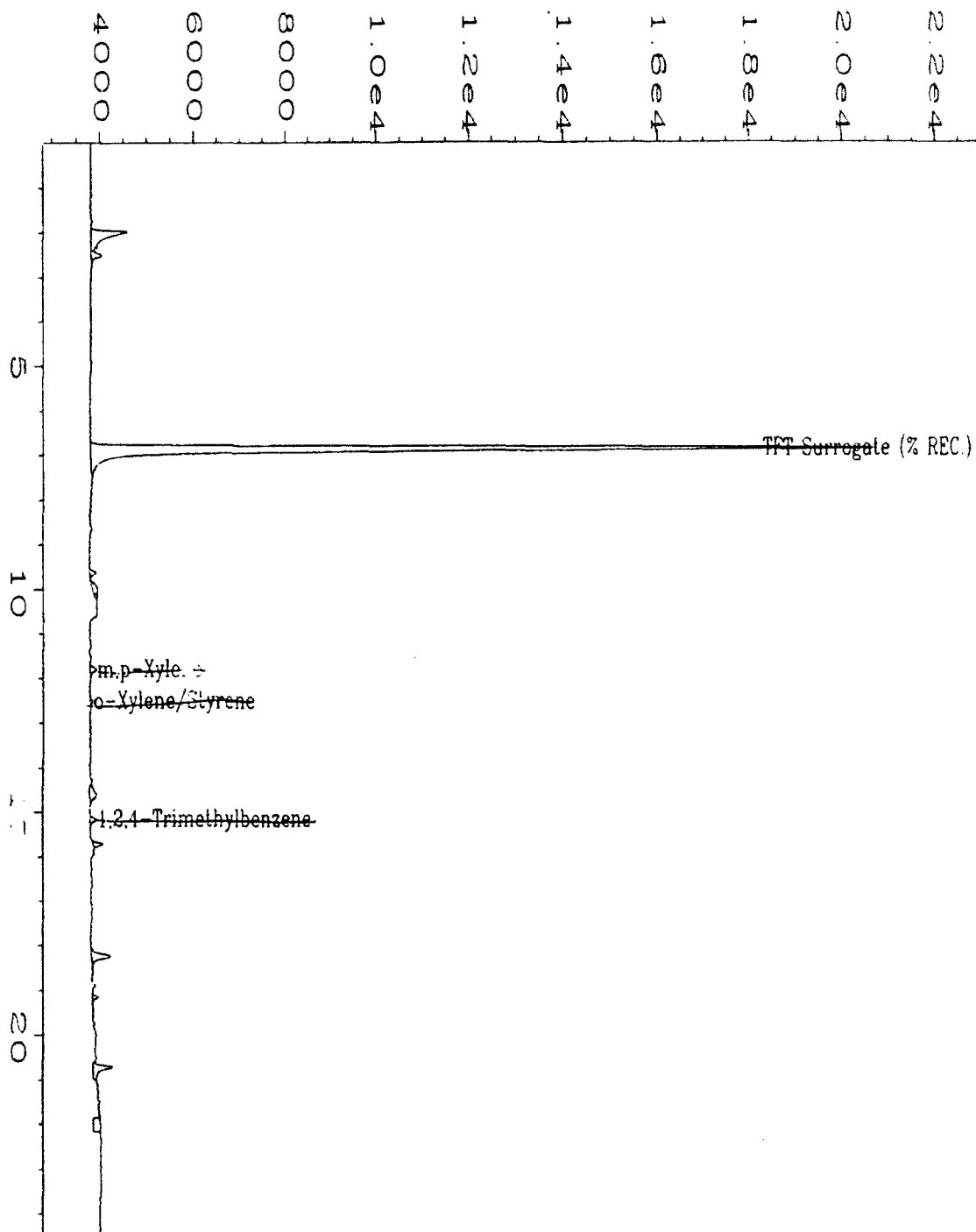
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved

24MP-7(2-4)



ata File Name	: C:\HPCHEM\2\DATA\BX20316\014R0401.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04163 DF=1	Sequence Line	: 4
n Time Bar Code:		Instrument Method	: BX20316
quired on	: 16 Mar 95 07:26 PM	Analysis Method	: BX20316
port Creat d on:	: 17 Mar 95 11:31 AM	Sample Amount	: 0
st Recalib on	: 17 MAR 95 10:55 AM	ISTD Amount	:
ltiplier	: 1		

3/28/9

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-8(2-4)	Client Project No.	: 722450.21020
Lab Sample Number	: X04164	MacDill	
Date Sampled	: 3/10/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 5.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/17/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031713
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	25
Toluene	108-88-3	U	25
Ethyl Benzene	100-41-4	U	25
Total Xylene	1330-20-7	U	25
Chlorobenzene	108-90-7	U	25
1,3,5-trimethylbenzene	108-67-8	U	25
1,2,4-trimethylbenzene	95-63-6	U	25
1,2,3-trimethylbenzene	526-73-8	U	25
1,2,3,4-tetramethylbenzene	488-23-3	U	25

Note: Sample run at DF=5 due to inability to purge at DF=1.

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample reported on a dry weight basis.

MDL = 2.5 ug/kg.

Surrogate Recovery:

a,a,a-Trifluorotoluene : 85%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

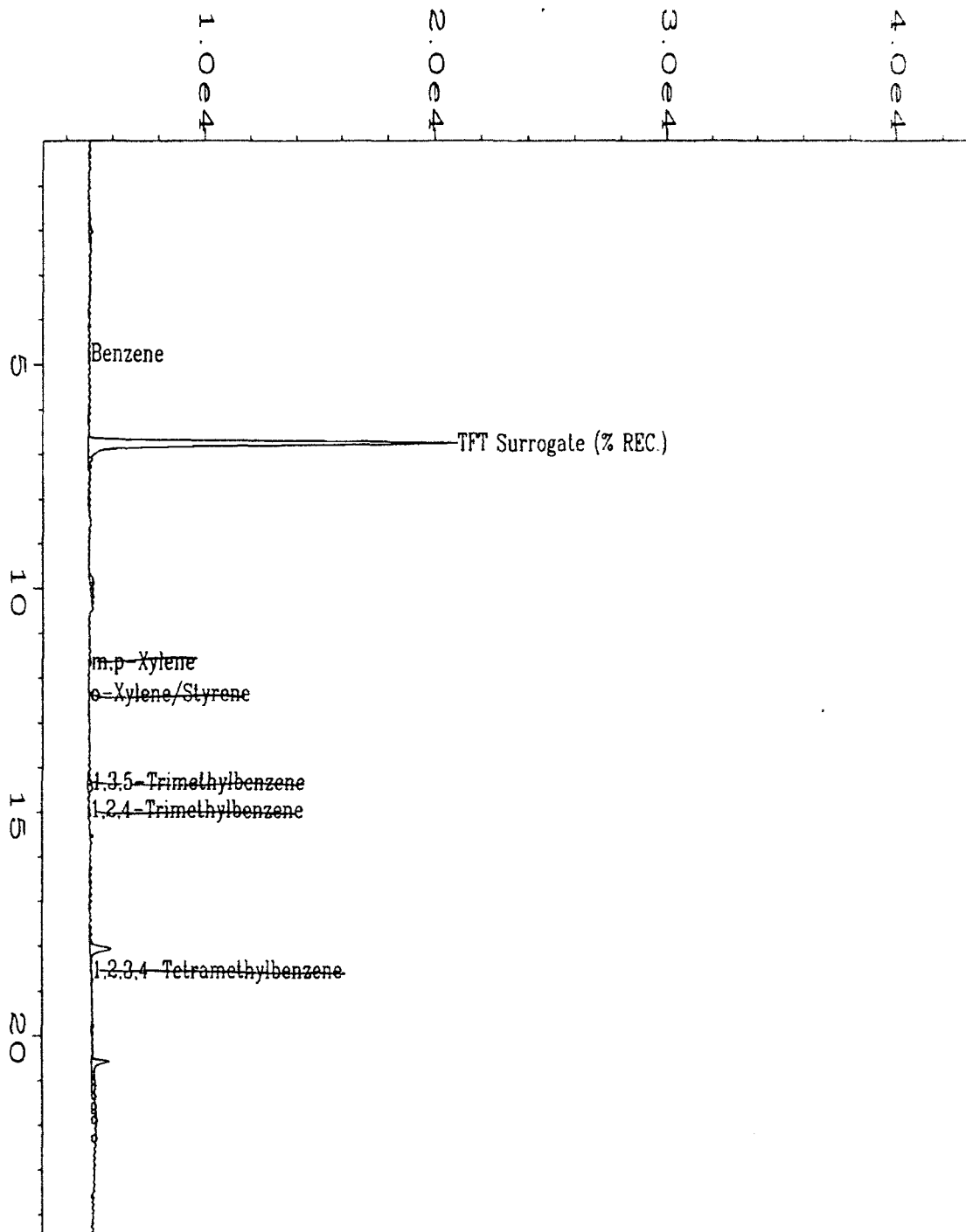
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved

24MP-8(2-4)



Data File Name	: C:\HPCHEM\2\DATA\BX20317\013R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04164 DF=5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX2031 IT
Acquired on	: 17 Mar 95 08:22 PM	Analysis Method	: BX20317.MT
Report Created on:	17 Mar 95 08:47 PM	Sample Amount	: 0
Last Recalib on	: 17 Mar 95 04:23 PM	ISTD Amount	:
Multiplier	: 5		
Sample Info	: Project#: 95-0819 Client#: 24MP-8(2-4) Soil		

Am 3/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-9(3-5)	Client Project No.	: 722450.21020
Lab Sample Number	: X04165		MacDill
Date Sampled	: 3/10/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/1/95	Method	: 8020
Date Analyzed	: 3/17/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031622
		Method Blank No.	: MB031695

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.9
Toluene	108-88-3	2.5 J	4.9
Ethyl Benzene	100-41-4	0.6 J	4.9
Total Xylene	1330-20-7	U	4.9
Chlorobenzene	108-90-7	U	4.9
1,3,5-trimethylbenzene	108-67-8	U	4.9
1,2,4-trimethylbenzene	95-63-6	U	4.9
1,2,3-trimethylbenzene	526-73-8	U	4.9
1,2,3,4-tetramethylbenzene	488-23-3	1.1 J	4.9

Note: Total Xylene consist of three isomers two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 68%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

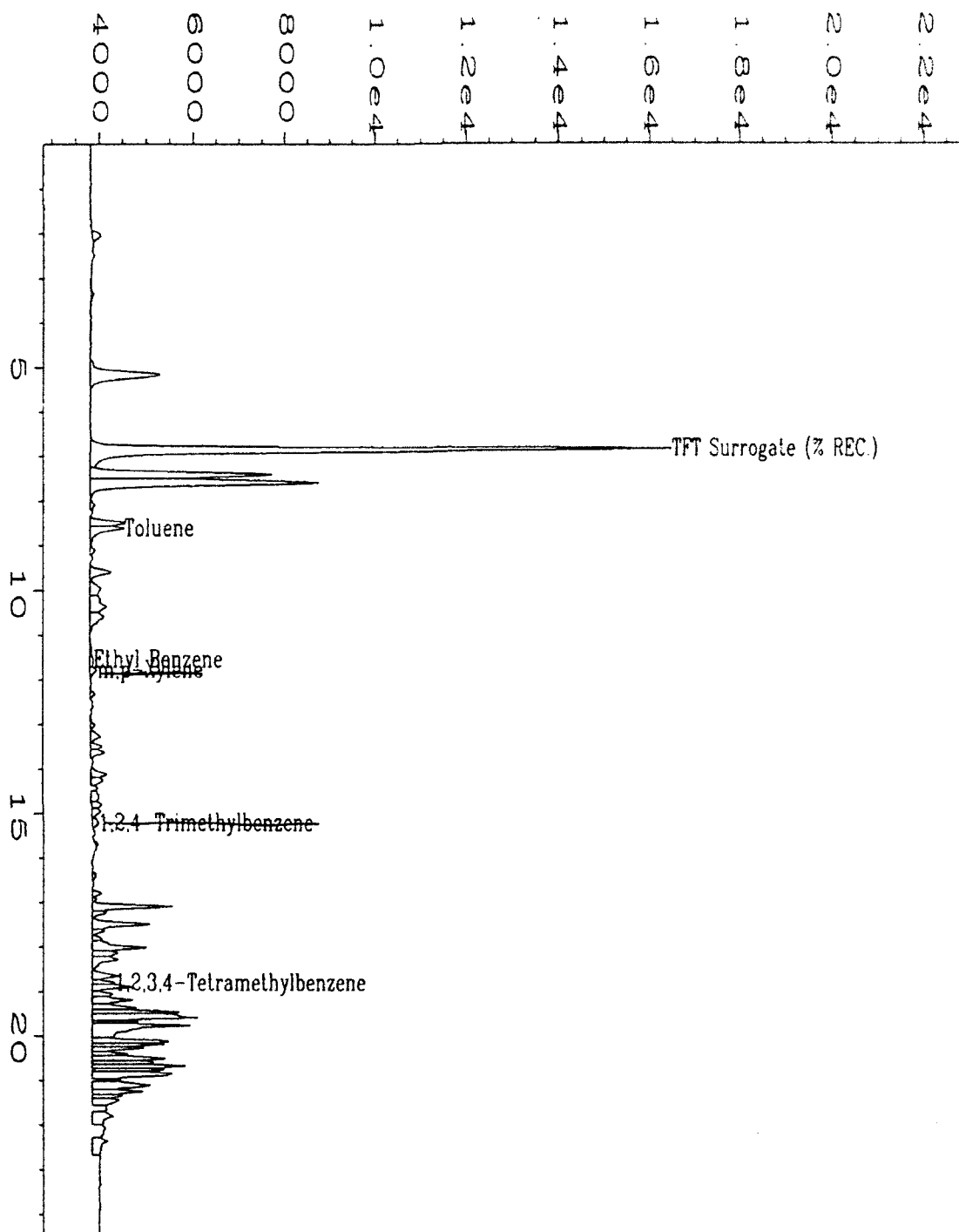
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved

24MP-9(3-5)



Data File Name	: C:\HPCHEM\2\DATA\BX20316\022R0401.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 22
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04165 DF=1	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	: BX20316.MT
Acquired on	: 17 Mar 95 01:18 AM	Analysis Method	: BX20316.MT
Report Created on:	: 17 Mar 95 11:56 AM	Sample Amount	: 0
Last Recalib on	: 17 MAR 95 10:55 AM	ISTD Amount	:
Multiplier	: 1		

pm 3/28/95

Client # 24MP-9(3-5)

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-9(9-11)	Client Project No.	: 722450.21020
Lab Sample Number	: X04166		MacDill
Date Sampled	: 3/10/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/16/95	Method	: 8020
Date Analyzed	: 3/17/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031623
		Method Blank No.	: MB031695

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	7.2	4.9
Toluene	108-88-3	1.0 J	4.9
Ethyl Benzene	100-41-4	U	4.9
Total Xylene	1330-20-7	U	4.9
Chlorobenzene	108-90-7	U	4.9
1,3,5-trimethylbenzene	108-67-8	U	4.9
1,2,4-trimethylbenzene	95-63-6	U	4.9
1,2,3-trimethylbenzene	526-73-8	U	4.9
1,2,3,4-tetramethylbenzene	488-23-3	1.1 J	4.9

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 71%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

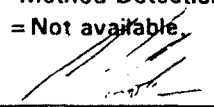
U = Compound analyzed for, but not detected.

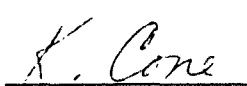
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

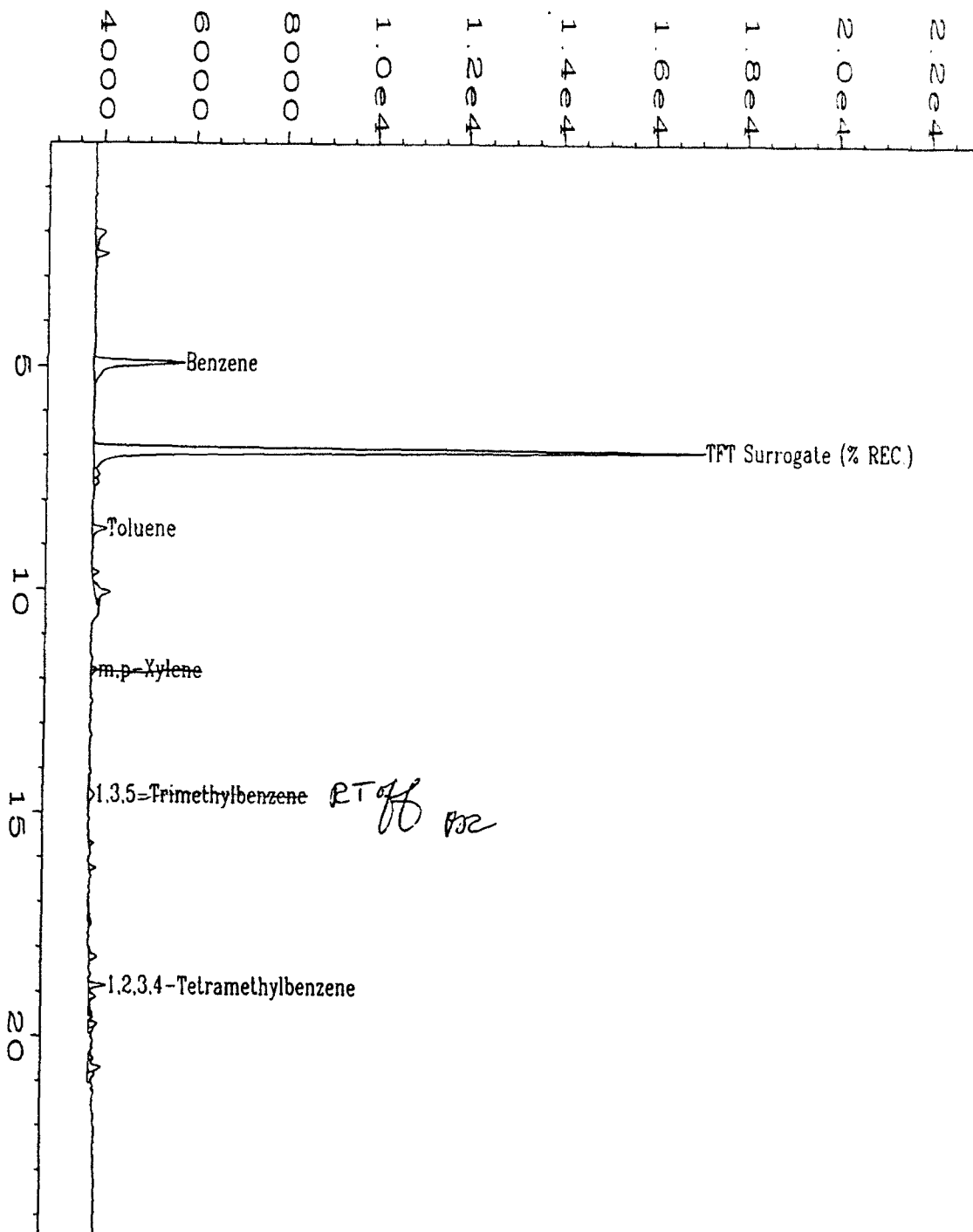
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available


Analyst


Approved

24MP-9(9-11)



Data File Name : C:\HPCHEM\2\DATA\BX20316\023R0401.D

Operator : C.J. Cook

Instrument : BTEX2

Sample Name : X04166 DF=1

Run Time Bar Code:

Acquired on : 17 Mar 95 02:02 AM

Report Created on: 17 Mar 95 11:56 AM

Last Recalib on : 17 MAR 95 10:55 AM

Multiplier : 1

Page Number : 1

Vial Number : 23

Injection Number : 1

Sequence Line : 4

Instrument Method: BX2031 .T

Analysis Method : BX20316.MT

Sample Amount : 0

ISTD Amount :

Am 3/25/95

Client # 24MP-9(9-11)

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-10(2-4)	Client Project No.	: 722450.21020
Lab Sample Number	: X04167	MacDill	
Date Sampled	: 3/11/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/17/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031714
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.8
Toluene	108-88-3	U	4.8
Ethyl Benzene	100-41-4	U	4.8
Total Xylene	1330-20-7	2.4 J	4.8
Chlorobenzene	108-90-7	U	4.8
1,3,5-trimethylbenzene	108-67-8	U	4.8
1,2,4-trimethylbenzene	95-63-6	U	4.8
1,2,3-trimethylbenzene	526-73-8	U	4.8
1,2,3,4-tetramethylbenzene	488-23-3	U	4.8

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 68%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

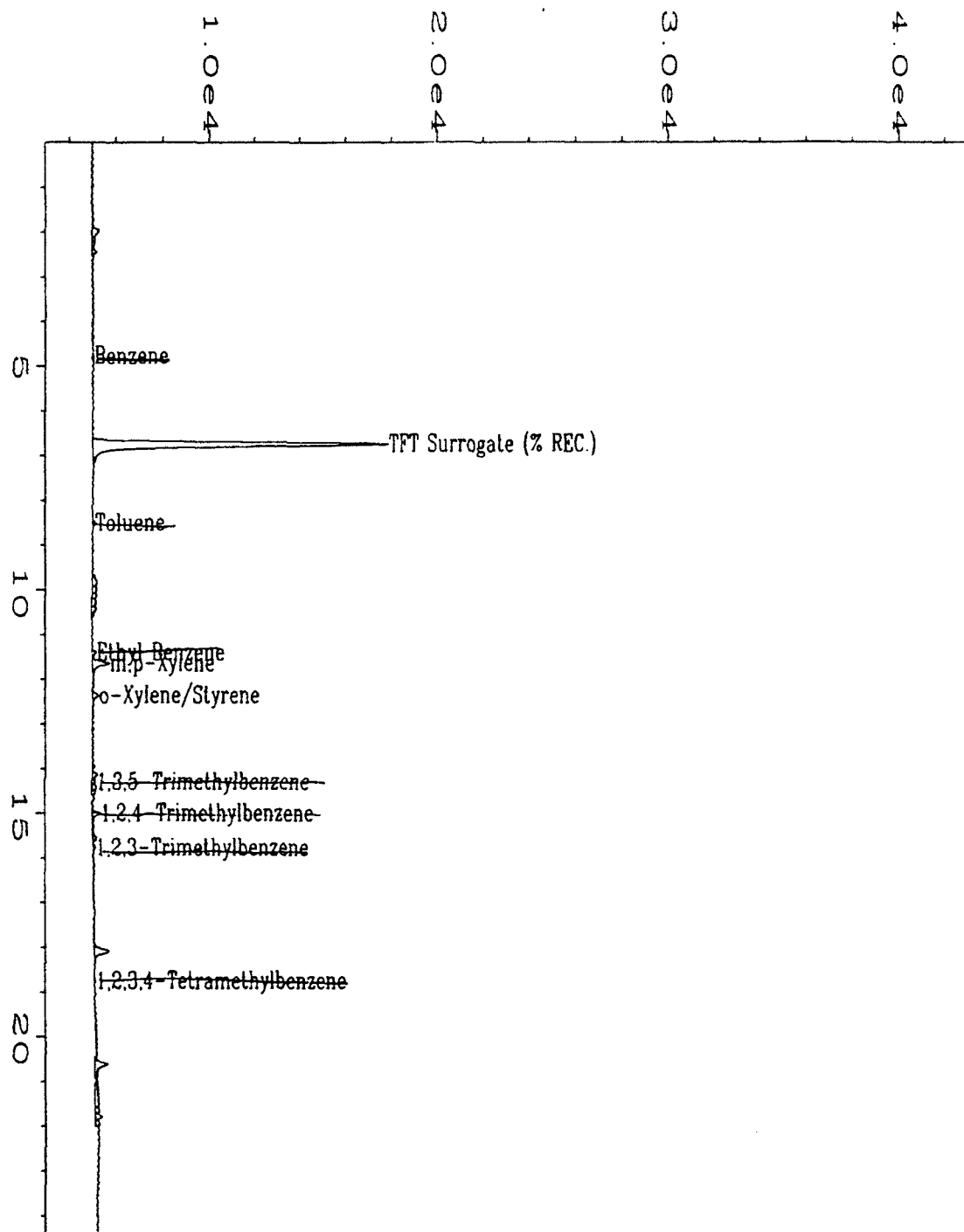
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved

24MP-10(2-4)



Data File Name	: C:\HPCHEM\2\DATA\BX20317\014R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04167 DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX2031 .MT
Acquired on	: 17 Mar 95 09:05 PM	Analysis Method	: BX20317.MT
Report Created on:	17 Mar 95 09:30 PM	Sample Amount	: 0
Last Recalib on	: 17 Mar 95 04:23 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0819 Client#: 24MP-10(2-4) Soil		

Am 3/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-10(2-4)	Client Project No.	: 722450.21020
Lab Sample Number	: X04167DUP		MacDill
Date Sampled	: 3/11/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/17/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031715
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.8
Toluene	108-88-3	U	4.8
Ethyl Benzene	100-41-4	0.6 J	4.8
Total Xylene	1330-20-7	2.2 J	4.8
Chlorobenzene	108-90-7	U	4.8
1,3,5-trimethylbenzene	108-67-8	U	4.8
1,2,4-trimethylbenzene	95-63-6	U	4.8
1,2,3-trimethylbenzene	526-73-8	U	4.8
1,2,3,4-tetramethylbenzene	488-23-3	U	4.8

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 69%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

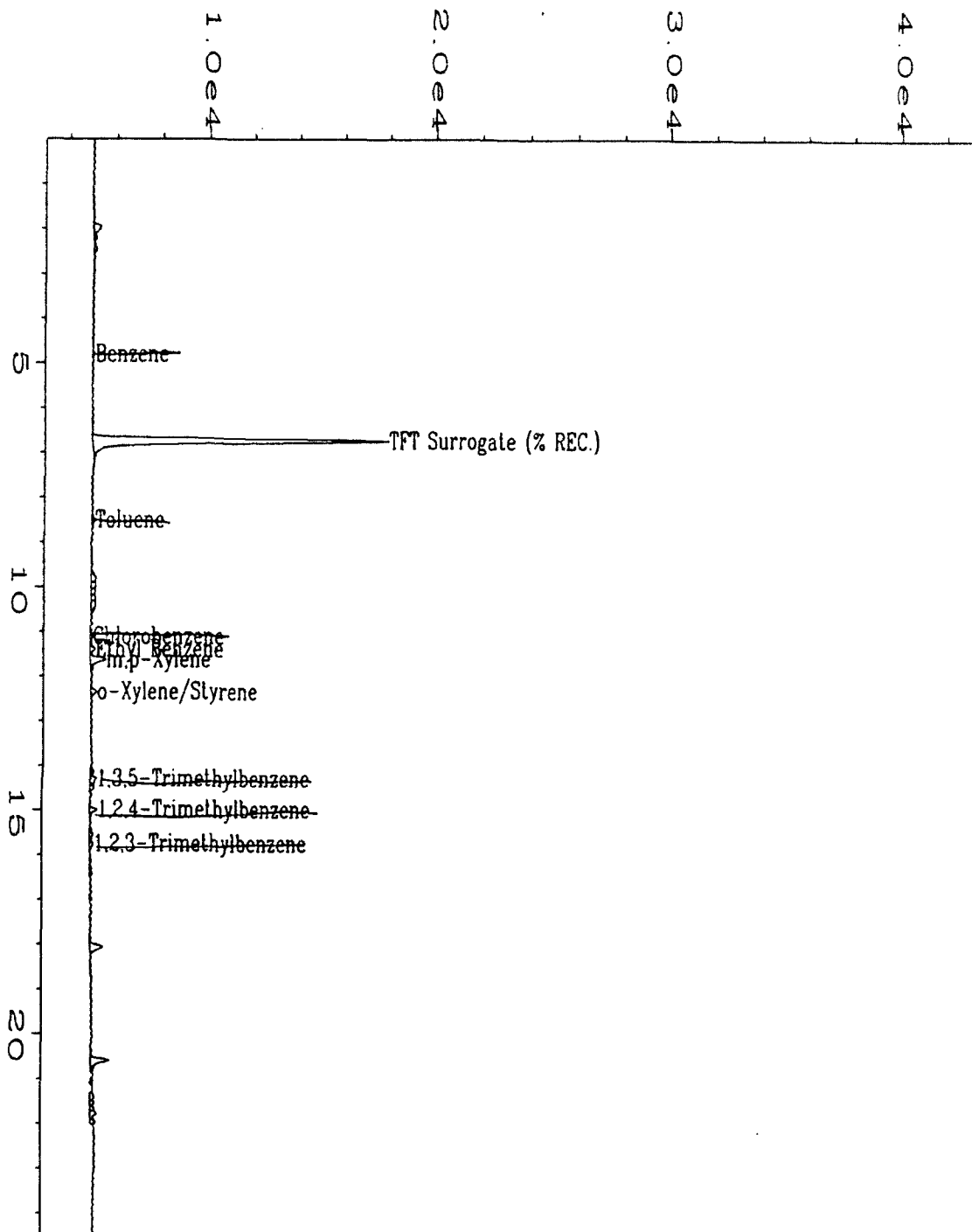
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available

Analyst

Approved

24MP-10(2-4) DUP



Data File Name	: C:\HPCHEM\2\DATA\BX20317\015R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04167DUP DF=1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX2031 TF
Acquired on	: 17 Mar 95 09:48 PM	Analysis Method	: BX20317.MTF
Report Created on:	17 Mar 95 10:13 PM	Sample Amount	: 0
Last Recalib on	: 17 Mar 95 04:23 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0819 Client#: 24MP-10(2-4) Soil		

pm 3/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MW-6(2-4)	Client Project No.	: 722450.21020
Lab Sample Number	: X04168		MacDill
Date Sampled	: 3/11/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 5.00
Date Extracted/Prepared	: 3/17/95	Method	: 8020
Date Analyzed	: 3/17/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031718
		Method Blank No.	: MB031795

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	25
Toluene	108-88-3	3.8 J	25
Ethyl Benzene	100-41-4	U	25
Total Xylene	1330-20-7	U	25
Chlorobenzene	108-90-7	U	25
1,3,5-trimethylbenzene	108-67-8	U	25
1,2,4-trimethylbenzene	95-63-6	U	25
1,2,3-trimethylbenzene	526-73-8	U	25
1,2,3,4-tetramethylbenzene	488-23-3	3.2 J	25

Note: Sample run at DF=5 due to inability to purge at DF=1.

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample reported on a dry weight basis.

MDL = 2.5 ug/kg.

Surrogate Recovery:

a,a,a-Trifluorotoluene : 78%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

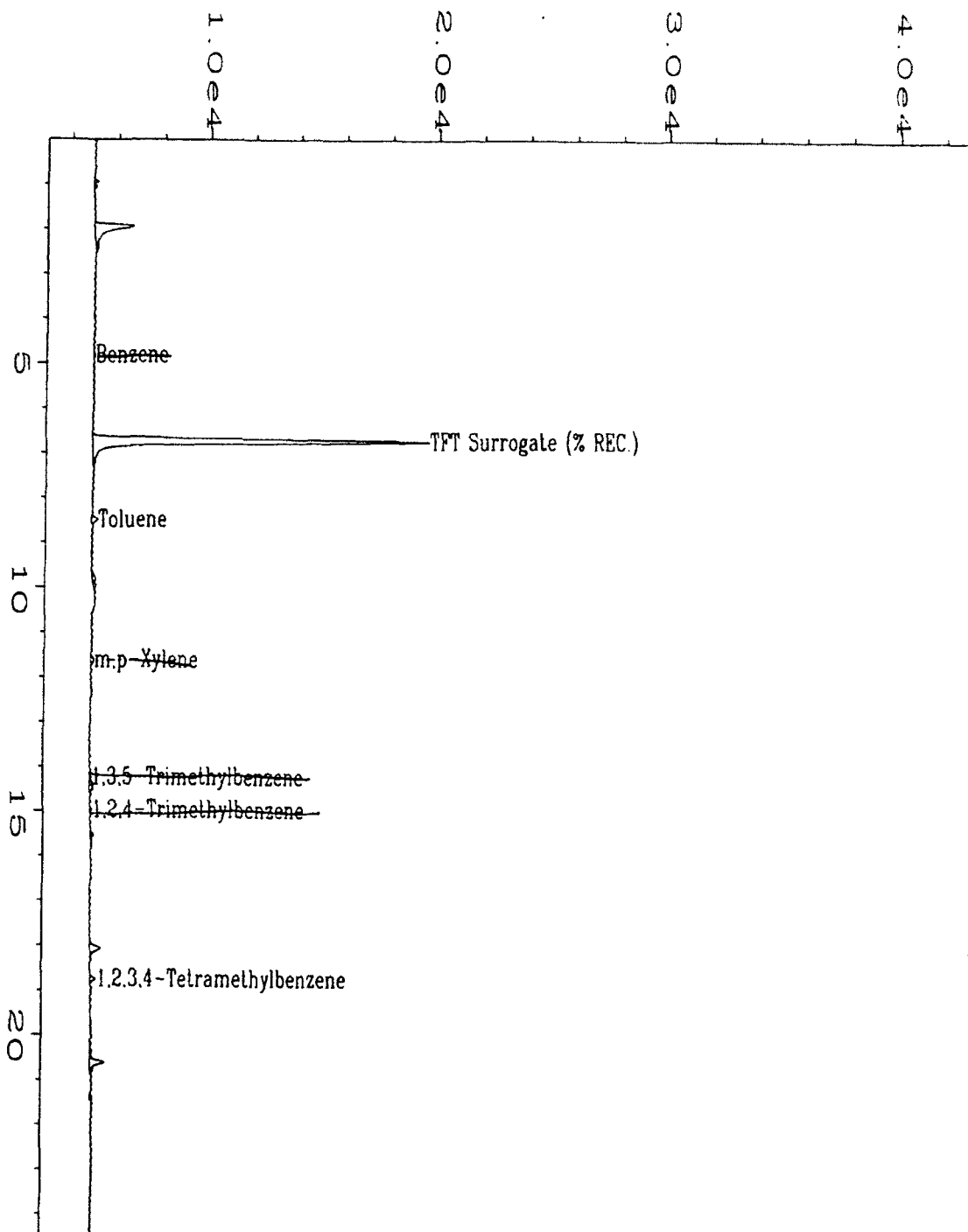
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved

24 MW - 6(2-4)



Data File Name : C:\HPCHEM\2\DATA\BX20317\018R0801.D

Operator : C.J. Cook

Instrument : BTEX2

Sample Name : X04168 DF=5

Run Time Bar Code:

Acquired on : 17 Mar 95 11:58 PM

Report Created on: 18 Mar 95 02:29 PM

Last Recalib on : 18 MAR 95 01:39 PM

Multiplier : 1

Page Number : 1

Vial Number : 18

Injection Number : 1

Sequence Line : 8

Instrument Method: BX20317 H

Analysis Method : BX20317.MTH

Sample Amount : 0

ISTD Amount :

Client # 24 MW - 6(2-4)

pm 3/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MW-6(9-11)	Client Project No.	: 722450.21020
Lab Sample Number	: X04169	MacDill	
Date Sampled	: 3/11/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/16/95	Method	: 8020
Date Analyzed	: 3/17/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2031626
		Method Blank No.	: MB031695

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.9
Toluene	108-88-3	U	4.9
Ethyl Benzene	100-41-4	U	4.9
Total Xylene	1330-20-7	U	4.9
Chlorobenzene	108-90-7	U	4.9
1,3,5-trimethylbenzene	108-67-8	U	4.9
1,2,4-trimethylbenzene	95-63-6	U	4.9
1,2,3-trimethylbenzene	526-73-8	U	4.9
1,2,3,4-tetramethylbenzene	488-23-3	1.0 J	4.9

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Sample reported on a dry weight basis.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 74%

QC Reporting Limits : 64%-130%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

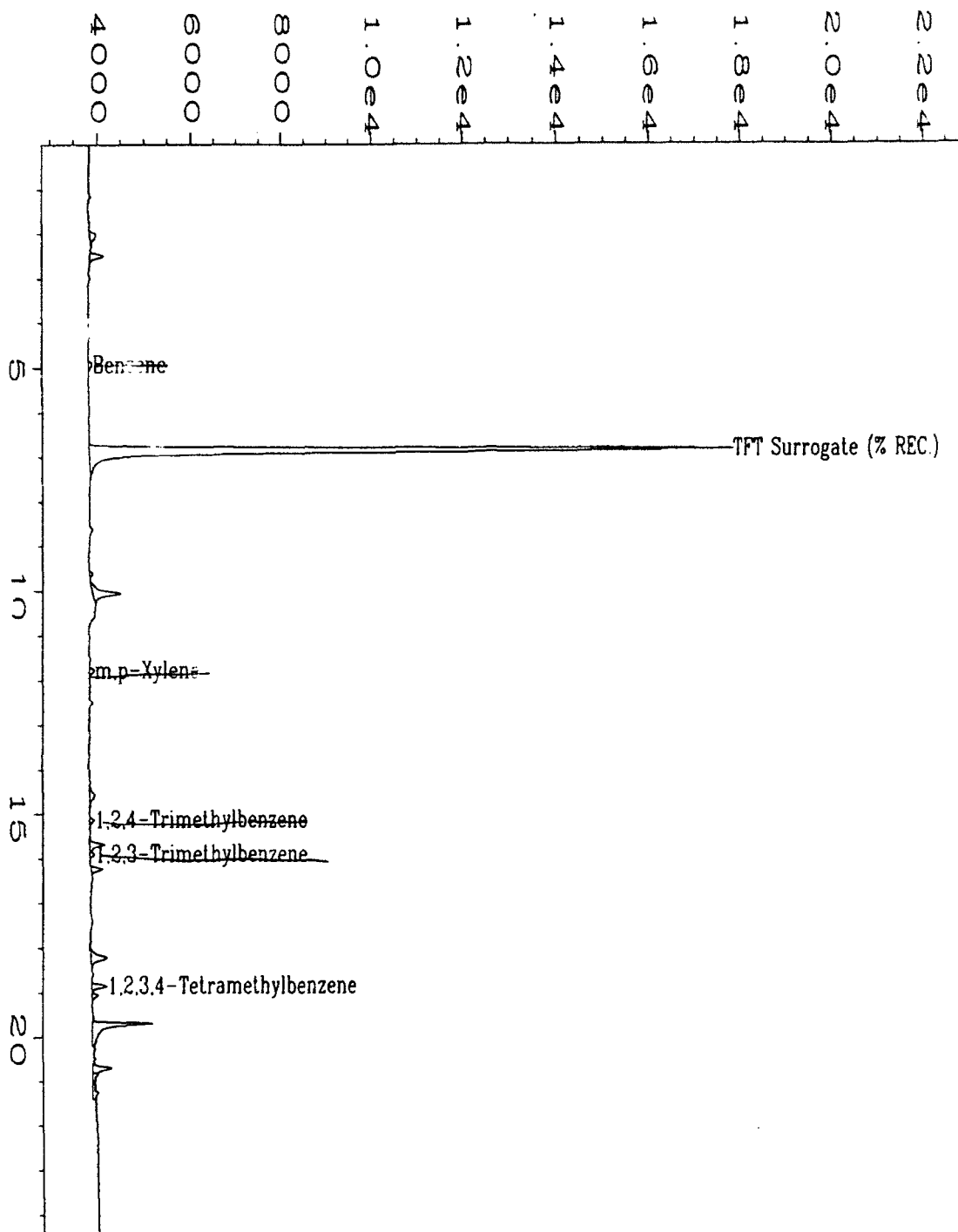
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved

24MW-6(9-11)



Data File Name : C:\HPCHEM\2\DATA\BX20316\026R0401.D

Operator : C.J. Cook

Instrument : BTEX2

Sample Name : X04169 DF=1

Run Time Bar Code:

Acquired on : 17 Mar 95 04:15 AM

Report Create on: 17 Mar 95 11:57 AM

Last Recalib : 17 MAR 95 10:55 AM

Multiplier : 1

Page Number : 1

Vial Number : 26

Injection Number : 1

Sequence Line : 4

Instrument Method: BX2031 .MT

Analysis Method : BX20316.MT

Sample Amount : 0

ISTD Amount :

Client # 24MW-6(9-11)

pm: 25/95

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS
TEH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24MP-7(2-4)	Client Project No.	: 722450.21020/MAC DI
Lab Sample No.	: X04163	Lab Project No.	: 95-0819
Date Sampled	: 3/10/95	EPA Method No.	: 3500/MOD.8015
Date Received	: 3/14/95	Matrix	: SOIL
Date Prepared	: 3/17/95	Method Blank	: SB031795
Date Analyzed	: 3/18/95		

Compound	Spike Added (ug/mL)	Sample Concentration (ug/mL)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Jet Fuel	1000	0	910	91	60-140

Compound	Spike Added (ug/mL)	MSD Concentration (ug/mL)	MS %REC	RPD	QC Limits	
					RPD	%REC
Jet Fuel	1000	930	93	2.2	50	60-140

* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

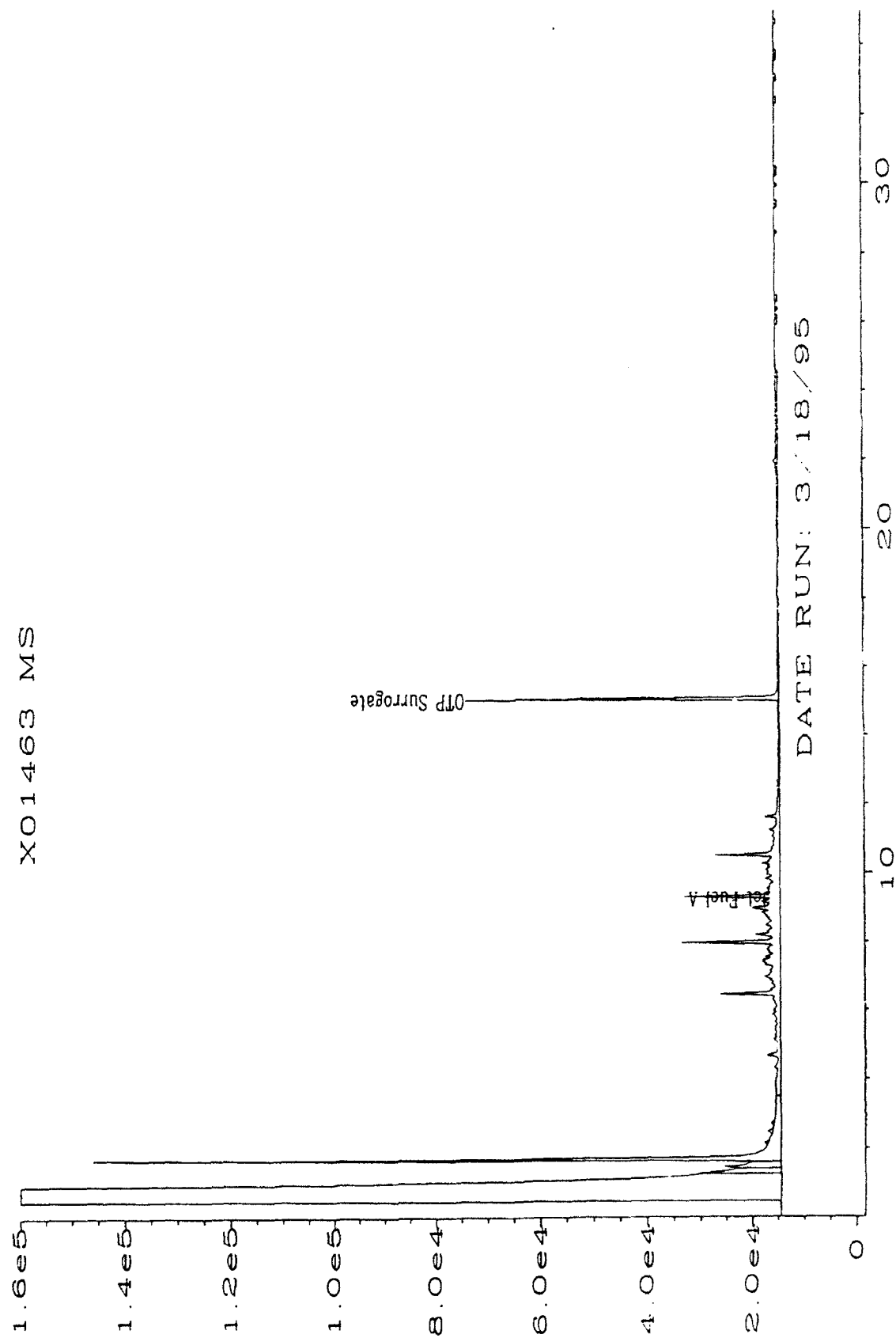
Spike Recovery: 0 out of (1) outside limits.

Comments: NA = Not analyzed/not applicable.

Values reported in ug/mL in the liquid extract.

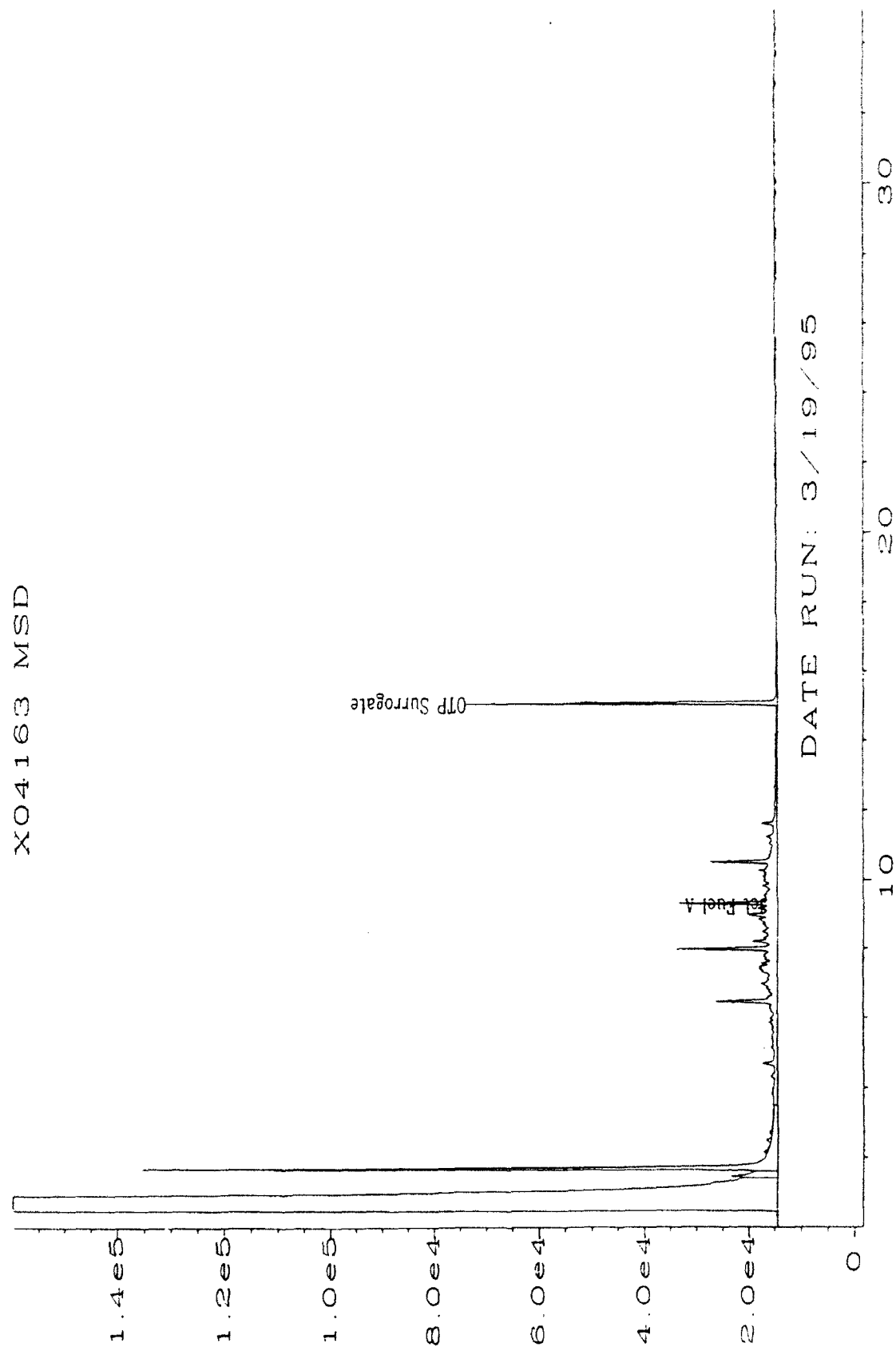
fp

XO1463 MS



Sig. 2 in C:\HPCHEM\2\DATA\7\EH0317\042R0101.D

XO4163 MSD



Sig. 2 in C:\HPCHEM\2\DATA\TEH0317\043R0101.D

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No. : 24MP-7(2-4) Client Project No. : 722450.21020/Mac D
Lab Sample No. : X04163 Lab Project No. : 95-0819
Date Sampled : 3/10/95-3/11/95 EPA Method No. : 5030/8015 Mod
Date Received : 3/14/95 Matrix : Soil
Date Prepared : 3/15/95 Method Blank : MB031595
Date Analyzed : 3/15/95-3/16/95

Compound	Spike Added (mg/Kg)	Sample Concentration (mg/Kg)	MS Concentration (mg/Kg)	MS %REC	QC Limits %REC
Gasoline	5.00	0.00	5.33	107	60-140

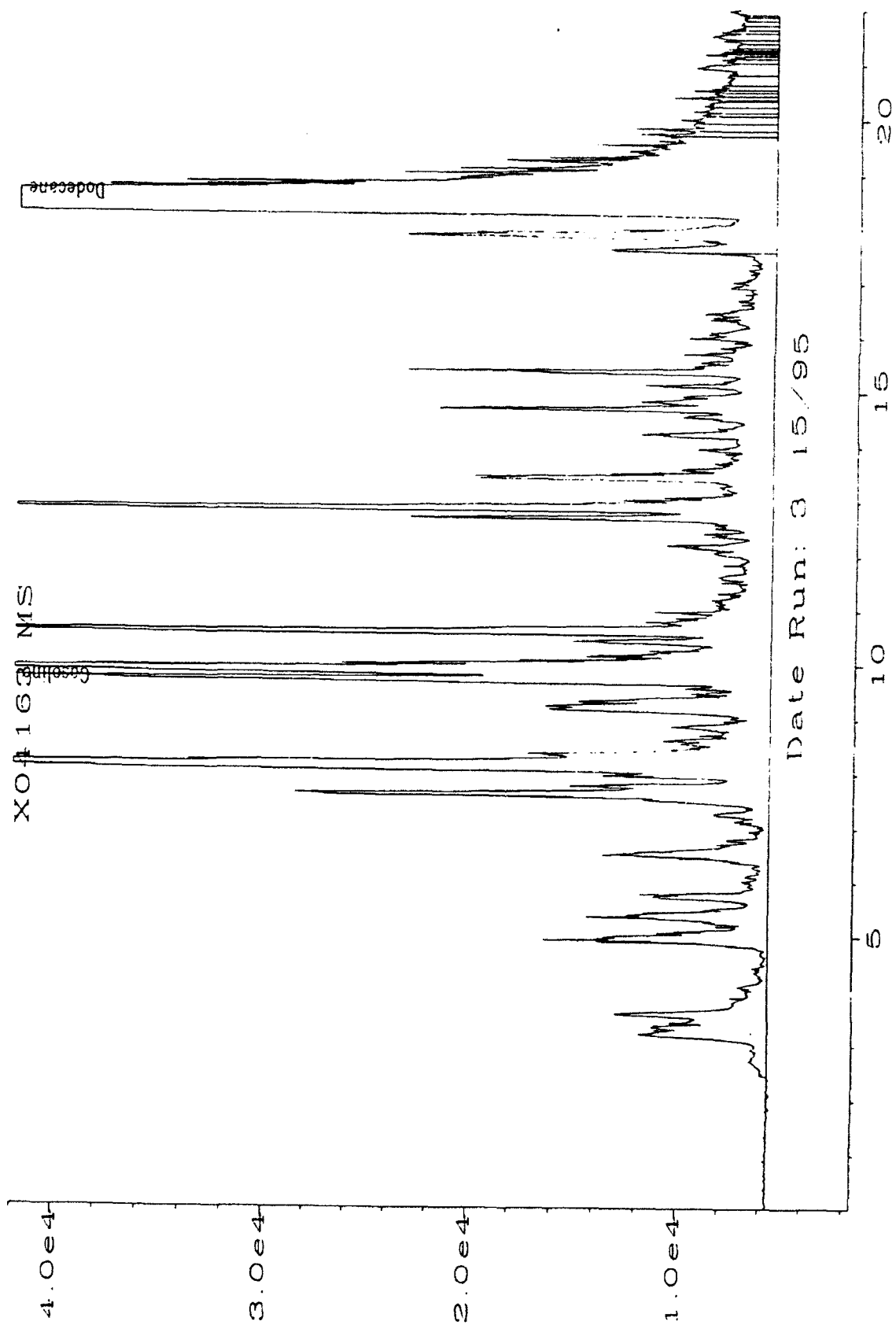
Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	5.00	4.97	99	7.0	30	60-140

* = Values outside of QC limits.

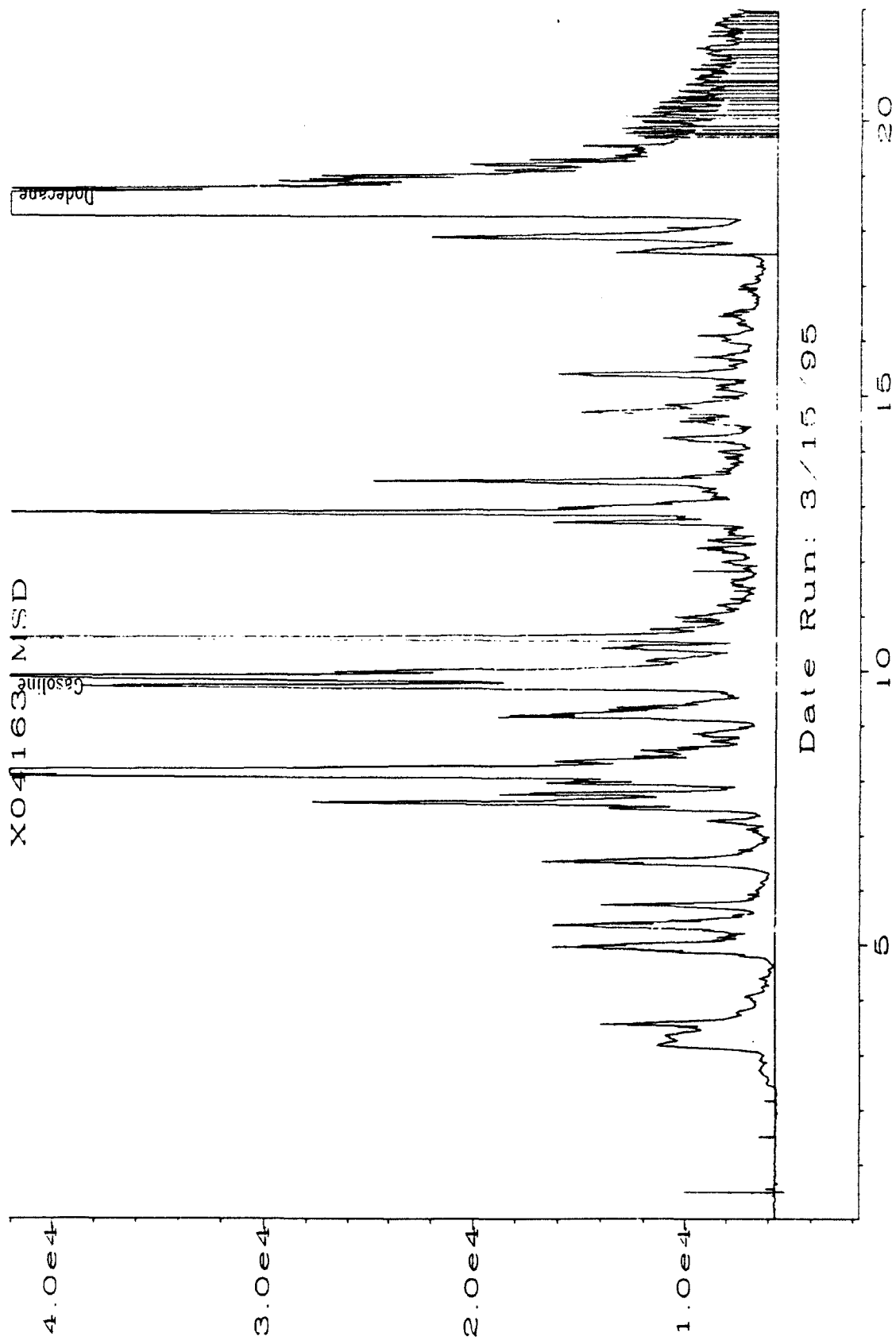
RPD: 0 out of (1) outside limits.

Spike Recovery: 0 out of (2) outside limits.

Comments: NA = Not analyzed/not applicable.



Sig. 1 in C:\NHP\CHEM\1.D\DATA\TVH0316\018F0101.D



Sig. 1 in C:\NHP\CHEM\1\DATA\TVH0315 019F0101.D

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Soil Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No. : 24MP-7(2-4)	Client Project No. : 722450.21020
Lab Sample No. : X04163	MacDill
Date Sampled : 3/10/95	Lab Project No. : 95-0819
Date Received : 3/14/95	EPA Method No. : 8020
Date Prepared : 3/16/95	Matrix : Soil
Date Analyzed : 3/16/95	Lab File Number(s) : BX2031615
	Method Blank : MB031695

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20	0.0	18.4	92	65-121
Toluene	20	0.0	18.7	94	69-117
Ethyl Benzene	20	0.0	18.8	94	68-118
m/p-Xylene	40	0.0	41.3	103	66-116
o-Xylene	20	0.0	18.8	94	73-117
Chlorobenzene	20	0.0	18.2	91	65-121
1,3,5-TMB	20	0.0	18.9	95	65-121
1,2,4-TMB	40	0.0	36.3	91	65-121
1,2,3-TMB	40	0.0	33.4	84	65-121
1,2,3,4-TeMB	20	0.0	17.3	87	65-121

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20	17.7	89	3.9	17.4	65-121
Toluene	20	18.0	90	3.8	15.8	69-117
Ethyl Benzene	20	18.2	91	3.2	11.9	68-118
m/p-Xylene	40	39.8	100	3.7	15.4	66-116
o-Xylene	20	17.9	90	4.9	13.2	73-117
Chlorobenzene	20	17.5	88	3.9	17.4	65-121
1,3,5-TMB	20	18.1	91	4.3	17.4	65-121
1,2,4-TMB	40	33.9	85	6.8	17.4	65-121
1,2,3-TMB	40	32.8	82	1.8	17.4	65-121
1,2,3,4-TeMB	20	15.4	77	12	17.4	65-121

* = Values outside of QC limits.

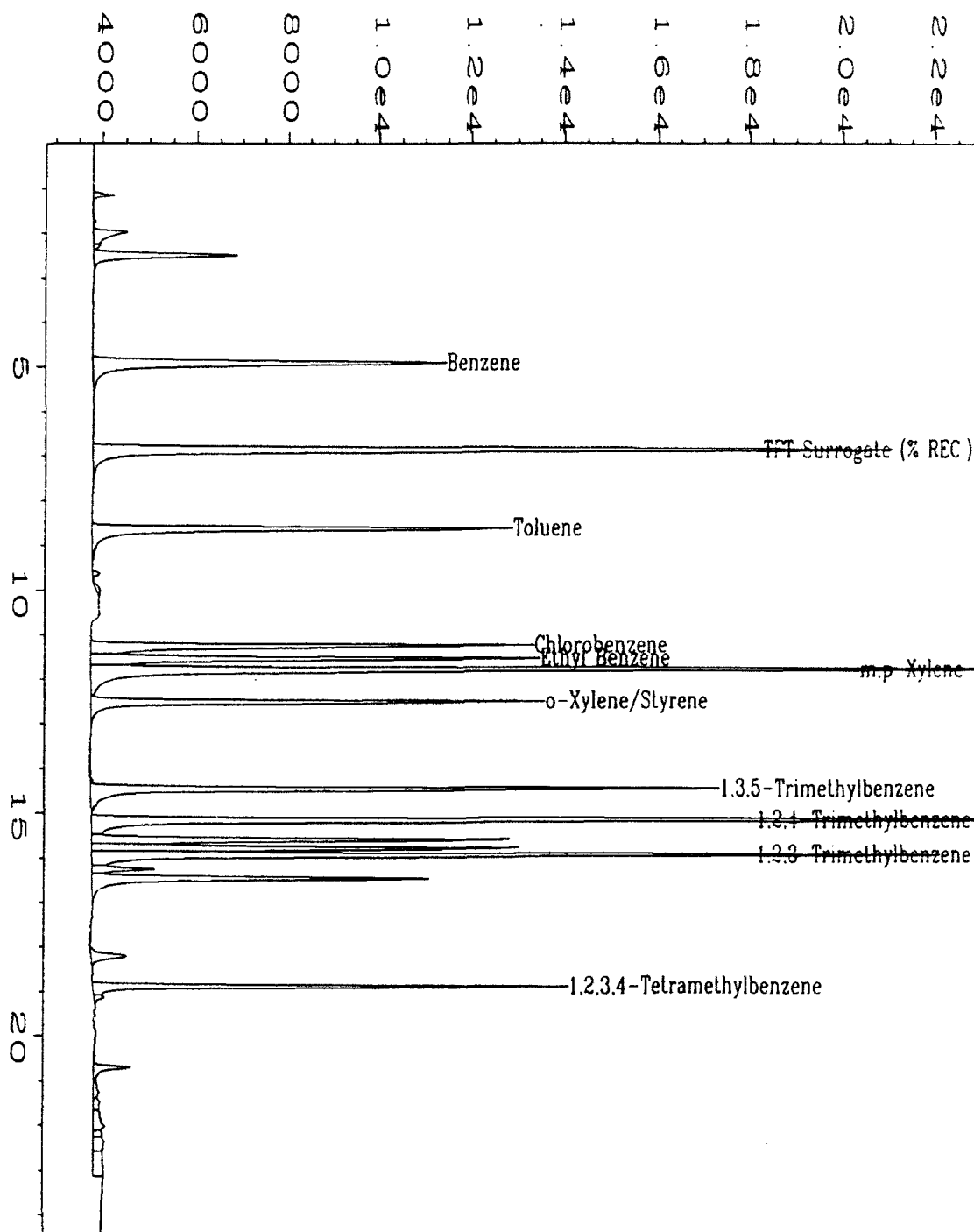
RPD: 0 out of (10) outside limits.

Spike Recovery: 0 out of (20) outside limits.

Comments: CJC

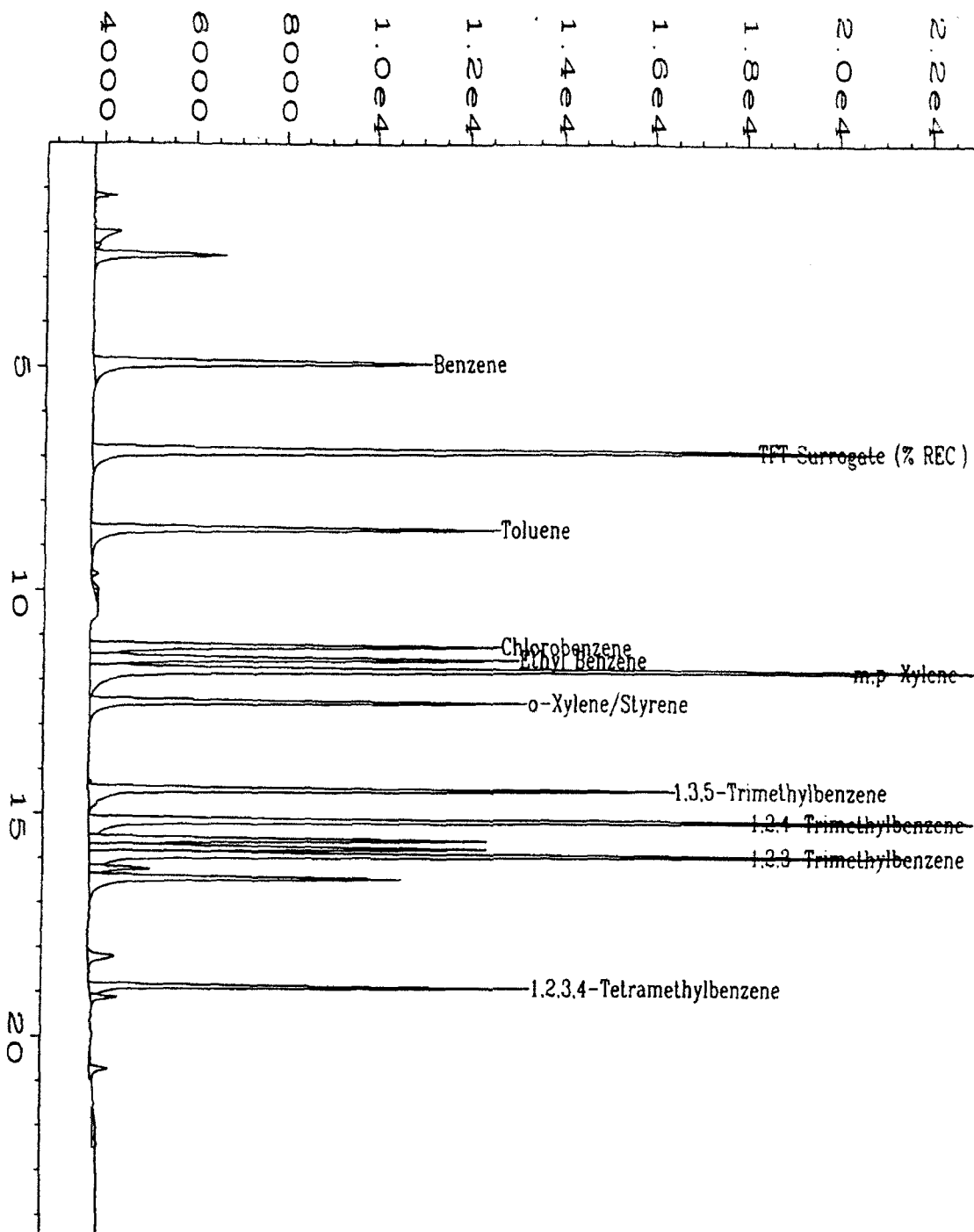
MP

24MP-7(2-4) MS



Data File Name	: C:\HPCHEM\2\DATA\BX20316\015R0401.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04163MS DF=1	Sequence Line	: 4
Run Time Bar Code:		Instrument Method	: BX20316 WH
Acquired on	: 16 Mar 95 08:11 PM	Analysis Method	: BX20316 ...H
Report Created on	: 17 Mar 95 11:31 AM	Sample Amount	: 0
Last Recalib on	: 17 MAR 95 10:55 AM	ISTD Amount	:
Multiplier	: 1		

24MP-7(2-4) MSD



Data File Name	: C:\HPCHEM\2\DATA\BX20316\016R0401.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04163MSD DF=1	Sequence Line	: 4
Run Time Bar Code:		Instrument Method	: BX20316.MTH
uired on	: 16 Mar 95 08:54 PM	Analysis Method	: BX20316.MTH
Report Created on:	: 17 Mar 95 11:32 AM	Sample Amount	: 0
Last Recalib on	: 17 MAR 95 10:55 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Rinsate Blank	Client Project No.	: 722450.21020
Lab Sample Number	: X04171		MacDill
Date Sampled	: 3/11/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/16/95	Method	: 8020
Date Analyzed	: 3/16/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2031620
		Method Blank No.	: MB031695

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4
Toluene	108-88-3	U	4
Ethyl Benzene	100-41-4	U	4
Total Xylene	1330-20-7	U	4
Chlorobenzene	108-90-7	U	4
1,3,5-trimethylbenzene	108-67-8	U	4
1,2,4-trimethylbenzene	95-63-6	U	4
1,2,3-trimethylbenzene	526-73-8	U	4
1,2,3,4-tetramethylbenzene	488-23-3	U	4

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 75%
QC Reporting Limits : 70%-131%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

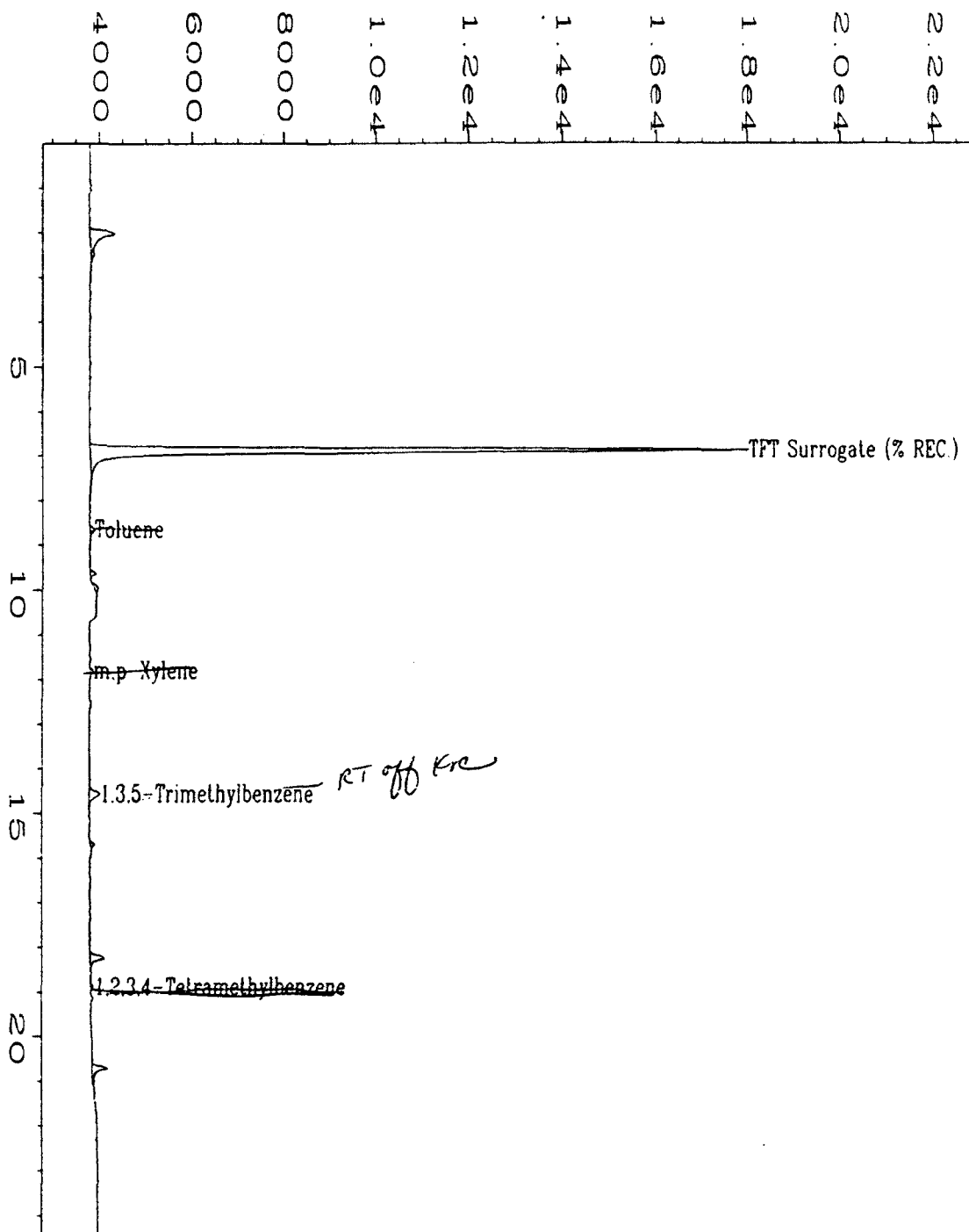
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved

Rinsate Blank



Data File Name	: C:\HPCHEM\2\DATA\BX20316\020R0401.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04171 DF=1	Sequence Line	: 4
Run Time Bar Code:		Instrument Method	: BX20316.MTH
quired on	: 16 Mar 95 11:50 PM	Analysis Method	: BX20316.MTH
Report Created on:	: 17 Mar 95 11:33 AM	Sample Amount	: 0
Last Recalib on	: 17 MAR 95 10:55 AM	ISTD Amount	:
Multiplier	: 1		

pm 3/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.21020
Lab Sample Number	: X04172	MacDill	
Date Sampled	: 3/11/95	Lab Project No.	: 95-0819
Date Received	: 3/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/16/95	Method	: 8020
Date Analyzed	: 3/17/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2031621
		Method Blank No.	: MB031695

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4
Toluene	108-88-3	U	4
Ethyl Benzene	100-41-4	U	4
Total Xylene	1330-20-7	U	4
Chlorobenzene	108-90-7	U	4
1,3,5-trimethylbenzene	108-67-8	U	4
1,2,4-trimethylbenzene	95-63-6	U	4
1,2,3-trimethylbenzene	526-73-8	U	4
1,2,3,4-tetramethylbenzene	488-23-3	U	4

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 74%
QC Reporting Limits : 70%-131%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

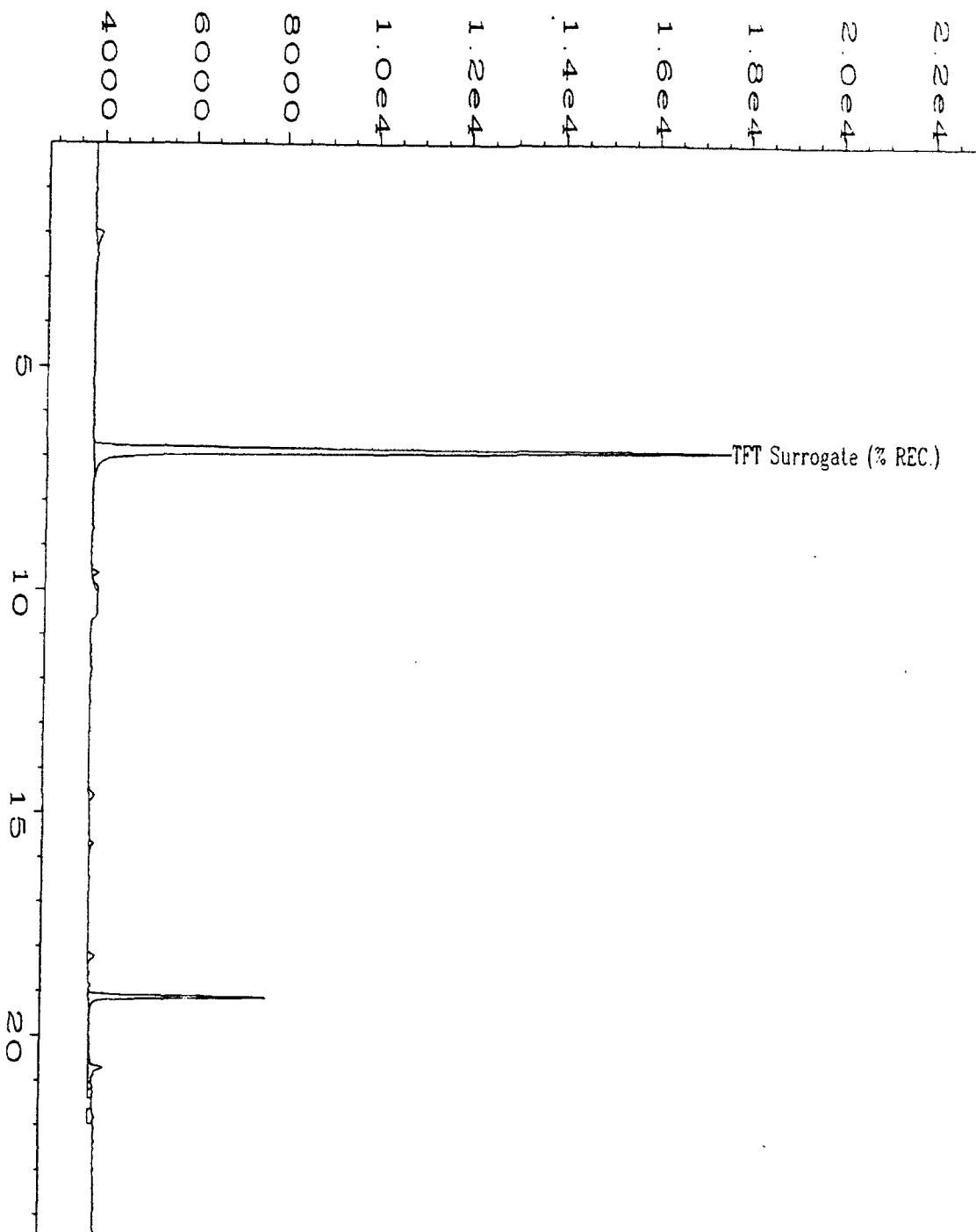
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved

Trip Blank



Data File Name	: C:\HPCHEM\2\DATA\BX20316\021R0401.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 21
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04172 DF=1	Sequence Line	: 4
Run Time Bar Code:		Instrument Method	: BX20316.MTH
Acquired on	: 17 Mar 95 00:35 AM	Analysis Method	: BX20316.MTH
Report Created on:	: 17 Mar 95 11:34 AM	Sample Amount	: 0
Last Recalib on	: 17 MAR 95 10:55 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB031695	Client Project No.	: 722450.21020
Date extracted/Prepared	: 3/16/95	MacDill	
Date analyzed	: 3/16/95	Lab Project No.	: 95-0819
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: Water
		Lab File No.	: BX2031609

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4
Toluene	108-88-3	U	4
Ethyl Benzene	100-41-4	U	4
Total Xylene	1330-20-7	U	4
Chlorobenzene	108-90-7	U	4
1,3,5-trimethylbenzene	108-67-8	U	4
1,2,4-trimethylbenzene	95-63-6	U	4
1,2,3-trimethylbenzene	526-73-8	U	4
1,2,3,4-tetramethylbenzene	488-23-3	U	4

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate recovery:

a,a,a-Trifluorotoluene : 97%
QC Reporting Limits : 70%-131%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

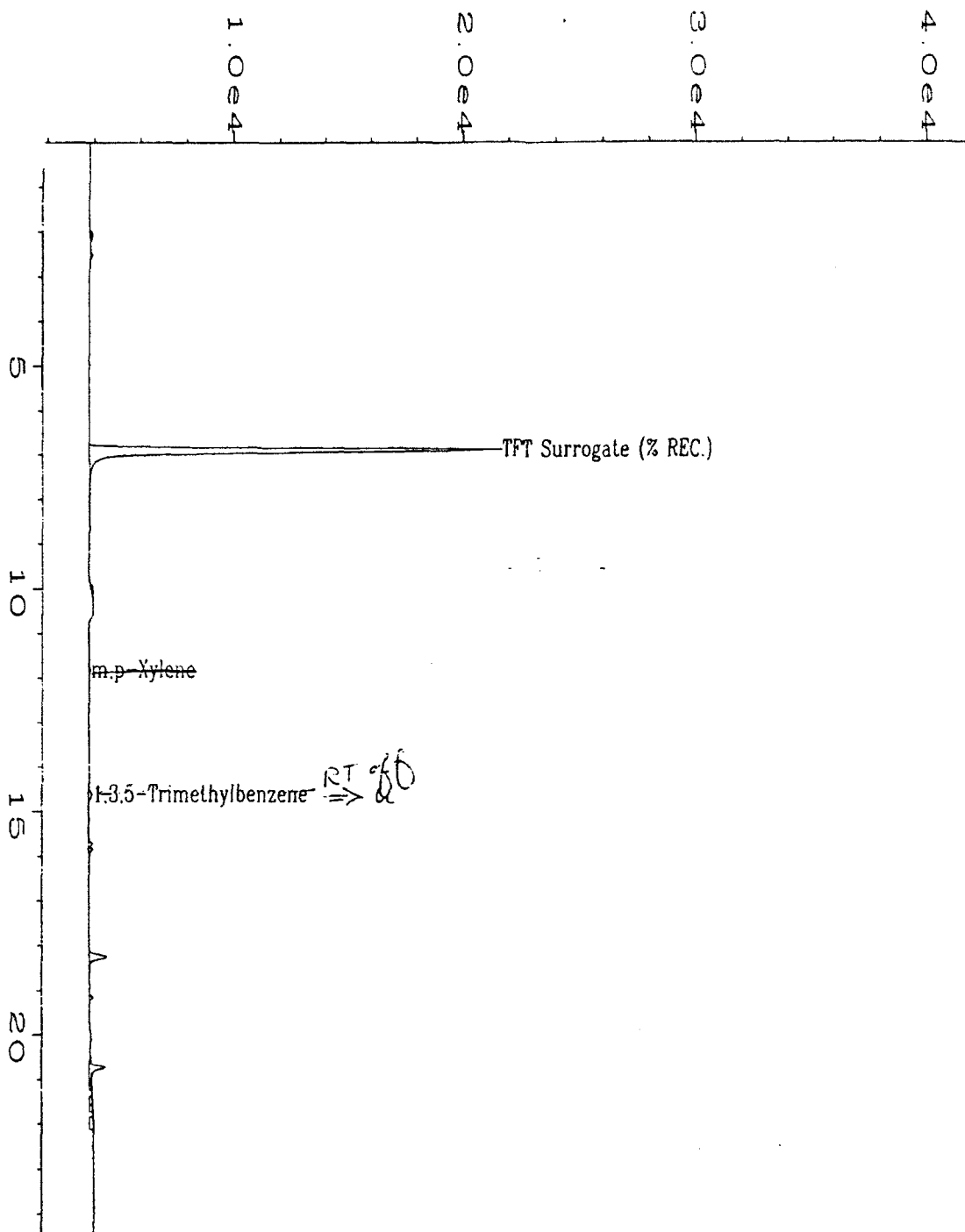
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available

Analyst

Approved

Method Blank



Data File Name	: C:\HPCHEM\2\DATA\BX20316\009R0401.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB031695-WATER	Sequence Line	: 4
Run Time Bar Code:		Instrument Method	: BX20316.MTH
Acquired on	: 16 Mar 95 03:41 PM	Analysis Method	: BX20316.MTH
Report Created on	: 17 Mar 95 11:29 AM	Sample Amount	: 0
Last Recalib on	: 17 MAR 95 10:55 AM	ISTD Amount	:
Multiplier	: 1		

pm 3/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB031795	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/17/95	Lab Project No.	: 95-0819
Date Analyzed	: 3/17/95	Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: Water
		Lab File No.	: BX2031709

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4
Toluene	108-88-3	U	4
Ethyl Benzene	100-41-4	U	4
Total Xylene	1330-20-7	U	4
Chlorobenzene	108-90-7	U	4
1,3,5-trimethylbenzene	108-67-8	U	4
1,2,4-trimethylbenzene	95-63-6	U	4
1,2,3-trimethylbenzene	526-73-8	U	4
1,2,3,4-tetramethylbenzene	488-23-3	U	4

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 90%
QC Reporting Limits : 70%-131%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical
Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the
Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

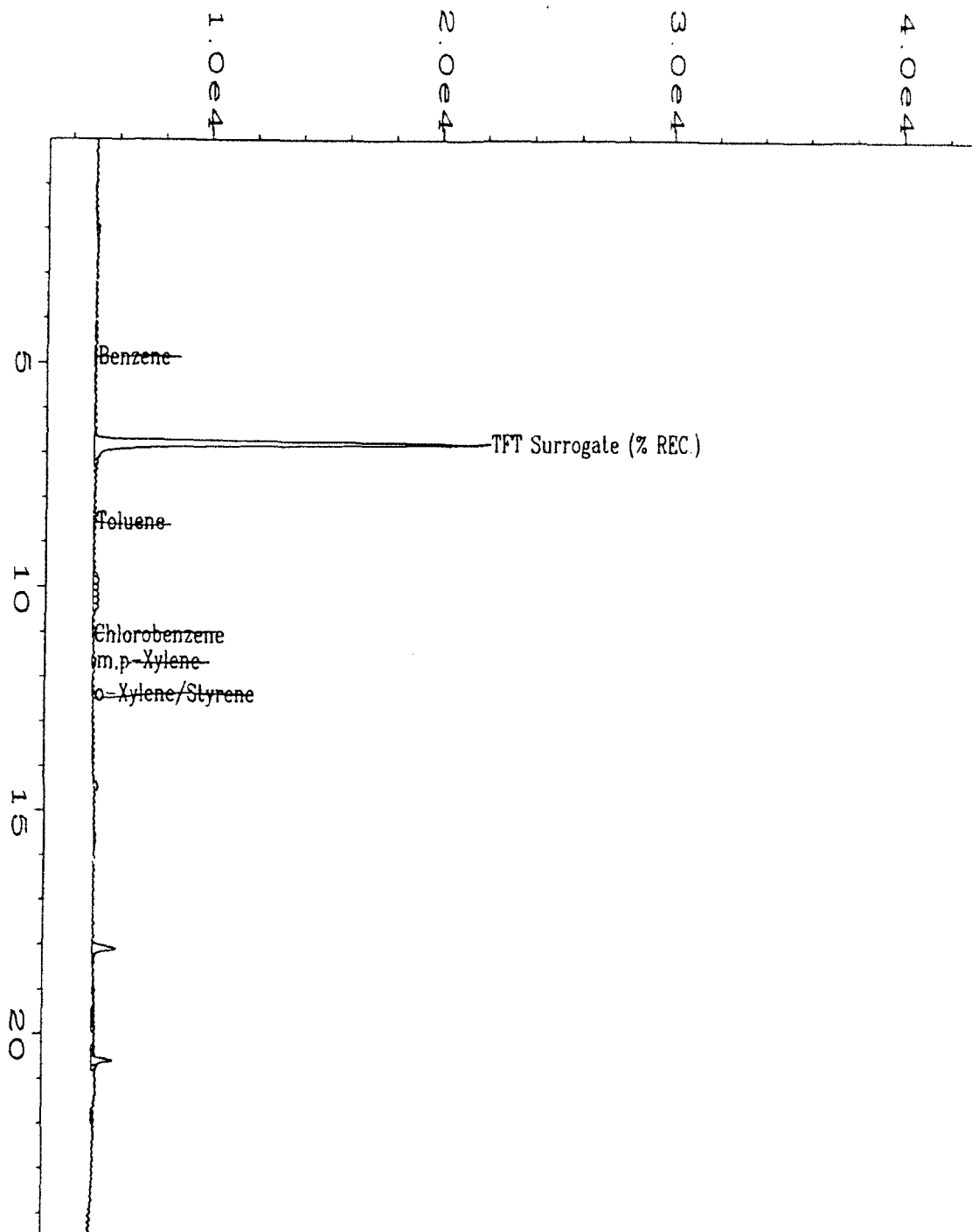
NA = Not available.

Analyst

Approved

K. Cone

Method Blank



Data File Name	: C:\HPCHEM\2\DATA\BX20317\009R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB031795-WATER	Sequence Line	: 8
Time Bar Code:		Instrument Method	: BX20317.MTH
Acquired on	: 17 Mar 95 05:27 PM	Analysis Method	: BX20317.MTH
Report Created on	: 17 Mar 95 05:52 PM	Sample Amount	: 0
Last Recalib on	: 17 Mar 95 04:23 PM	ISTD Amount	:
Multiplier	: 1		

pm 3/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS031795	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/17/95	Lab Project No.	: 95-0819
Date Analyzed	: 3/17/95	Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2031710

Compound Name	Cas Number	LCS Concentration ug/L	QC Limit ug/L
Benzene	71-43-2	17.3	12-24
Toluene	108-88-3	16.3	13-22
Ethyl Benzene	100-41-4	16.0	13-24
m,p-Xylene	NA	16.2	13-24
o-Xylene	95-47-6	15.9	13-24
Chlorobenzene	108-90-7	16.1	14-23
1,3,5-trimethylbenzene	108-67-8	16.2	12-24
1,2,4-trimethylbenzene	95-63-6	12.7	12-23
1,2,3-trimethylbenzene	526-73-8	14.0	15-25
1,2,3,4-tetramethylbenzene	488-23-3	15.4	NA

Note: Total Xylene consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

Surrogate Recovery:
a,a,a,-Trifluorotoluene : 90%
QC Reporting Limits : 69%-131%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

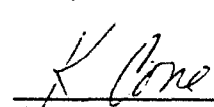
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

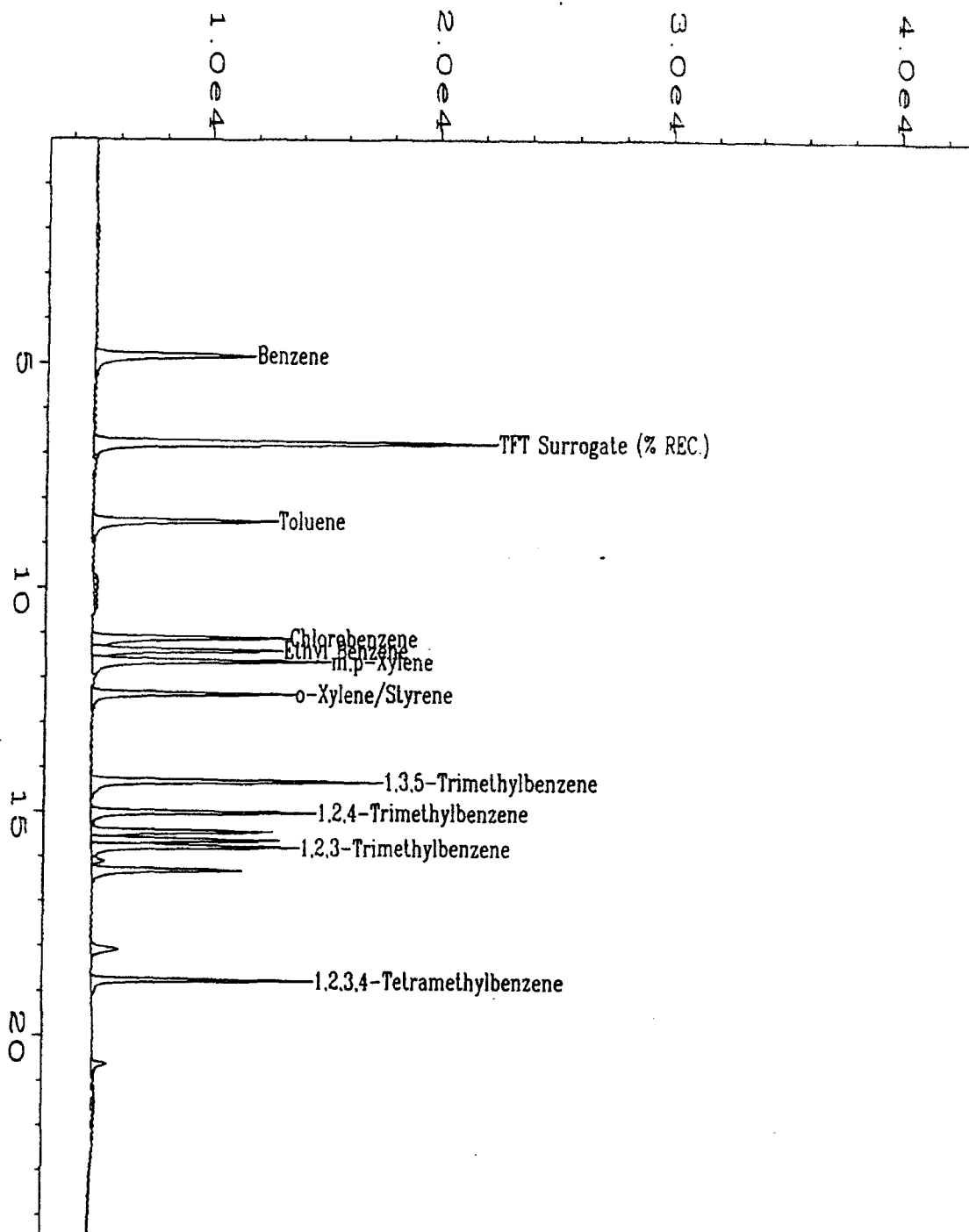
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved

LCS



Data File Name	: C:\HPCHEM\2\DATA\BX20317\010R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS031795	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20317.MTH
Acquired on	: 17 Mar 95 06:11 PM	Analysis Method	: BX20317.MTH
Report Created on:	17 Mar 95 06:36 PM	Sample Amount	: 0
Last Recalib on	: 17 Mar 95 04:23 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS031695	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/16/95	Lab Project No.	: 95-0819
Date Analyzed	: 3/16/95	Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2031610

Compound Name	Cas Number	LCS Concentration ug/L	QC Limit ug/L
Benzene	71-43-2	18.4	12-24
Toluene	108-88-3	17.8	13-22
Ethyl Benzene	100-41-4	18.0	13-24
m,p-Xylene	NA	16.7	13-24
o-Xylene	95-47-6	17.4	13-24
Chlorobenzene	108-90-7	17.9	14-23
1,3,5-trimethylbenzene	108-67-8	18.8	12-24
1,2,4-trimethylbenzene	95-63-6	14.2	12-23
1,2,3-trimethylbenzene	526-73-8	16.2	15-25
1,2,3,4-tetramethylbenzene	488-23-3	17.8	NA

Note: Total Xylene consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

Surrogate Recovery:

a,a,a,-Trifluorotoluene : 96%
QC Reporting Limits : 69%-131%

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

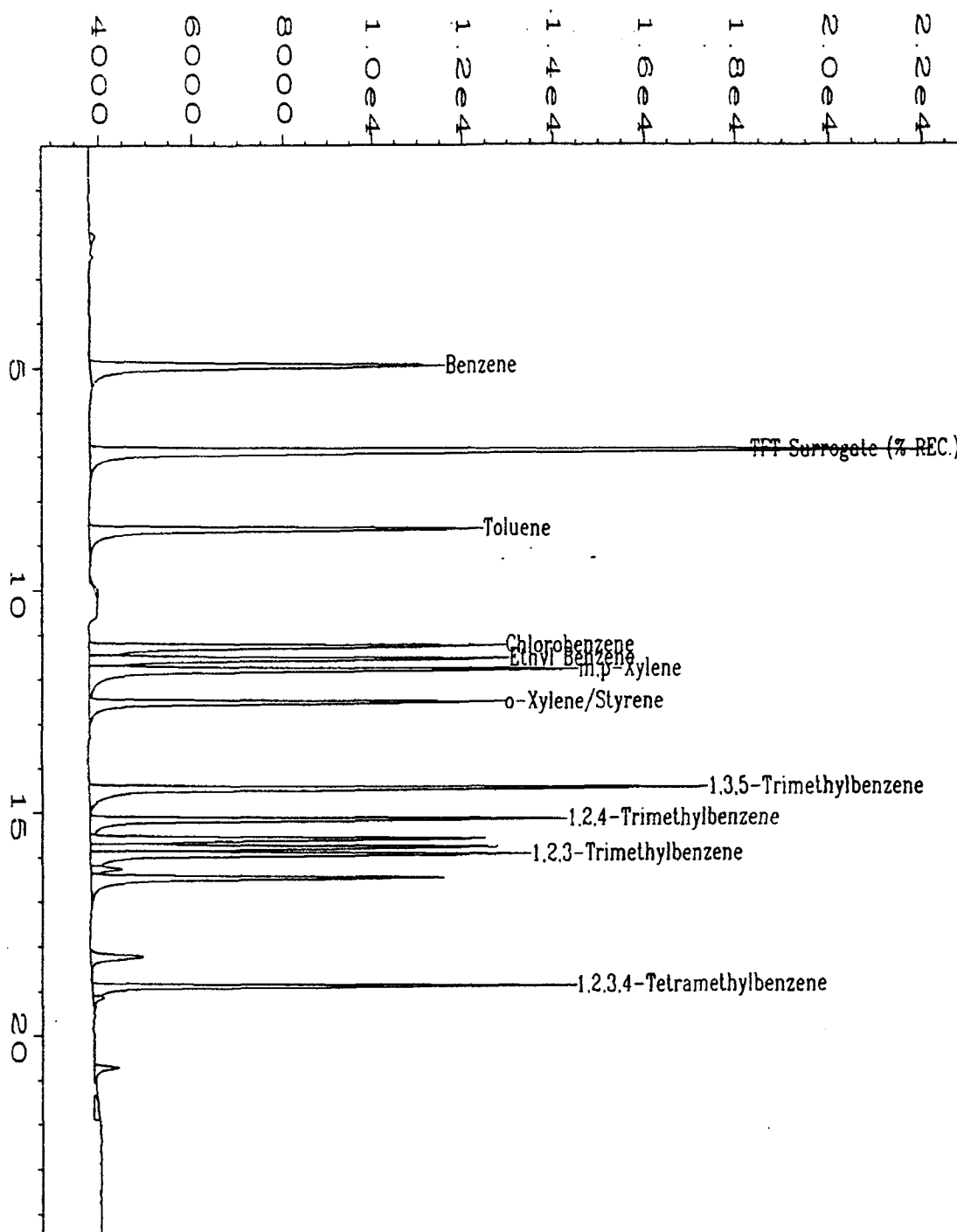
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

Analyst

Approved

LCS



Data File Name	: C:\HPCHEM\2\DATA\BX20316\010R0401.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS031695	Sequence Line	: 4
Print Time Bar Code:		Instrument Method:	: BX20316.MTH
Acquired on	: 16 Mar 95 04:26 PM	Analysis Method	: BX20316.MTH
Report Created on:	: 17 Mar 95 11:29 AM	Sample Amount	: 0
Last Recalib on	: 17 MAR 95 10:55 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)

Date Sampled : 3/10/95-3/11/95 Client Project Number : 722450.21020/Mac Dill
Date Received : 3/14/95 Lab Project Number : 95-0819
Date Prepared : 3/15/95 Matrix : Soil
Date Analyzed : 3/15/95-3/16/95 Method Number : 5030/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH** mg/Kg	MDL** mg/Kg
MB031595	Method Blank	100%	U	0.1
X04163	24MP-7(2-4) ✓	115%	U	0.12
X04164	24MP-8(2-4) ✓	116%	U	0.12
X04165	24MP-9(3-5) ✓	132%	0.17	0.12
X04166	24MP-9(9-11) ✓	124%	U	0.12
X04167	24MP-10(2-4) ✓	126%	U	0.12
X04168	24MW-6(2-4)	127%	U	0.13
X04169	24MW-6(9-11)	122%	U	0.12
X04170	175MP-1(3-5)	130%	U	0.12
X04170 DUP	175MP-1(3-5)	119%	U	0.12

QUALIFIERS


U = TVH analyzed for but not detected.


B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

MDL = Method Detection Limit

** = All sample results and MDLs are reported on a dry weight basis.


Analyst


Approved

NB031595 Method Blank

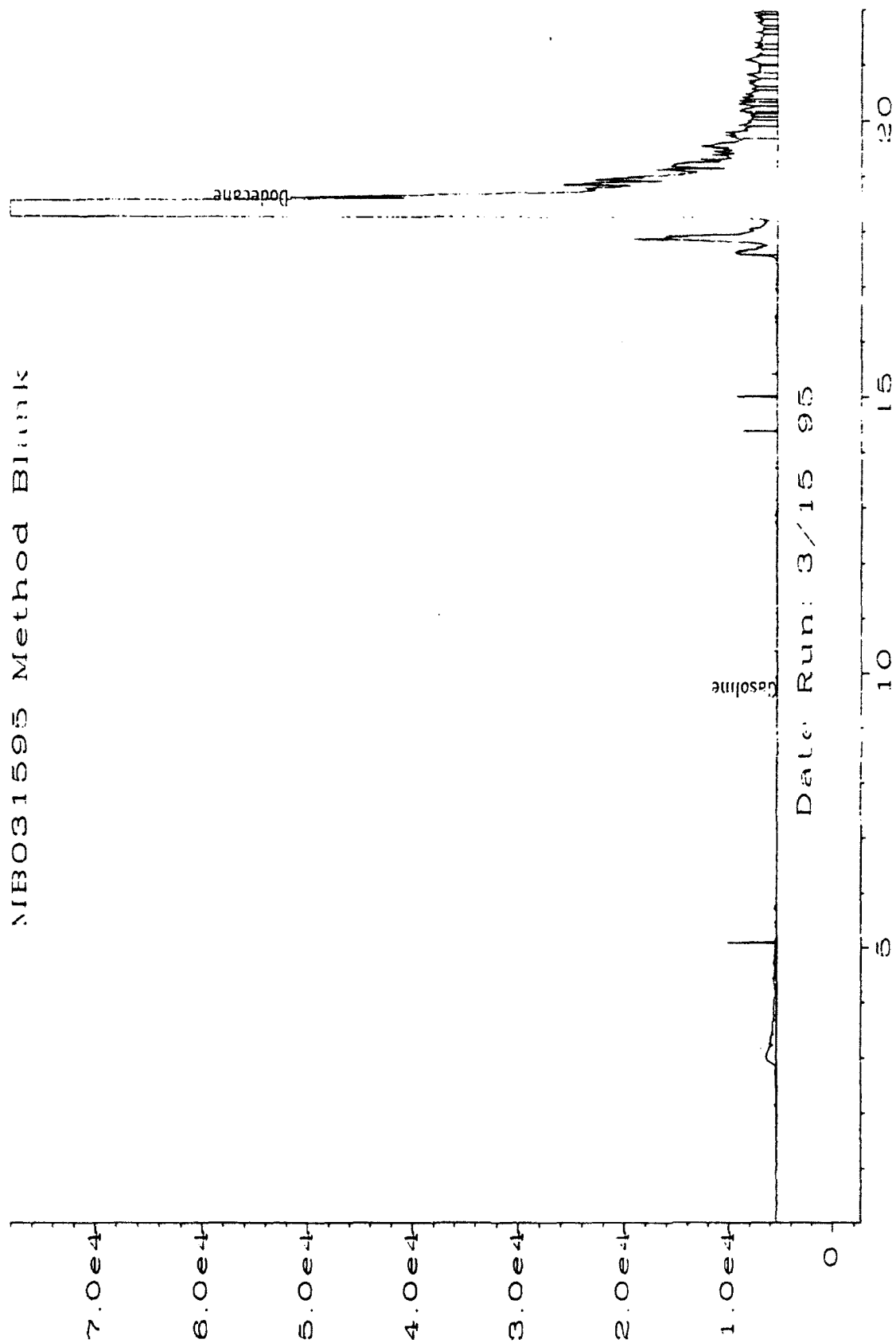
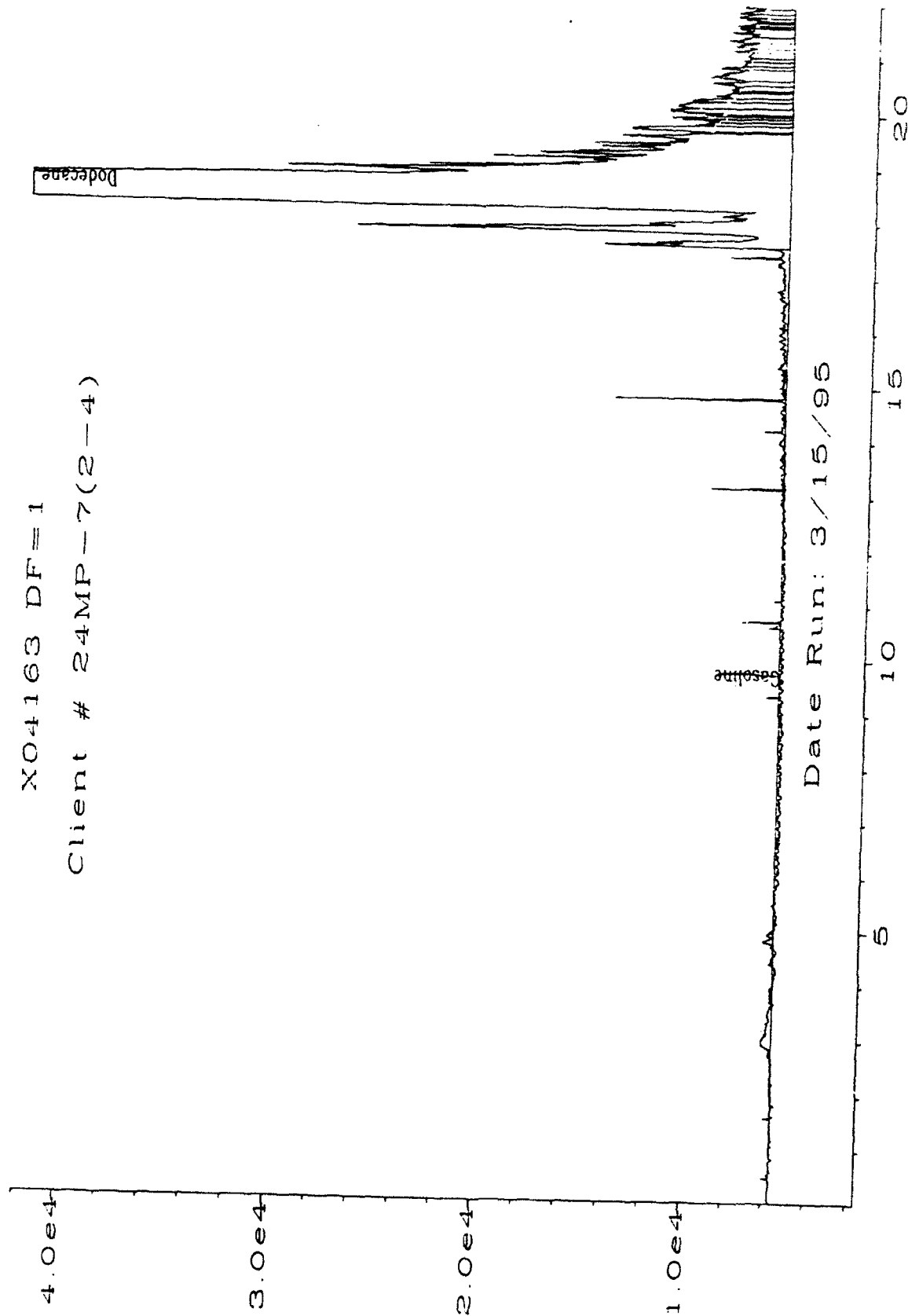


Fig. 1 in CINHPCHEM1.D\DATA\TVH0315 00\F0101.D

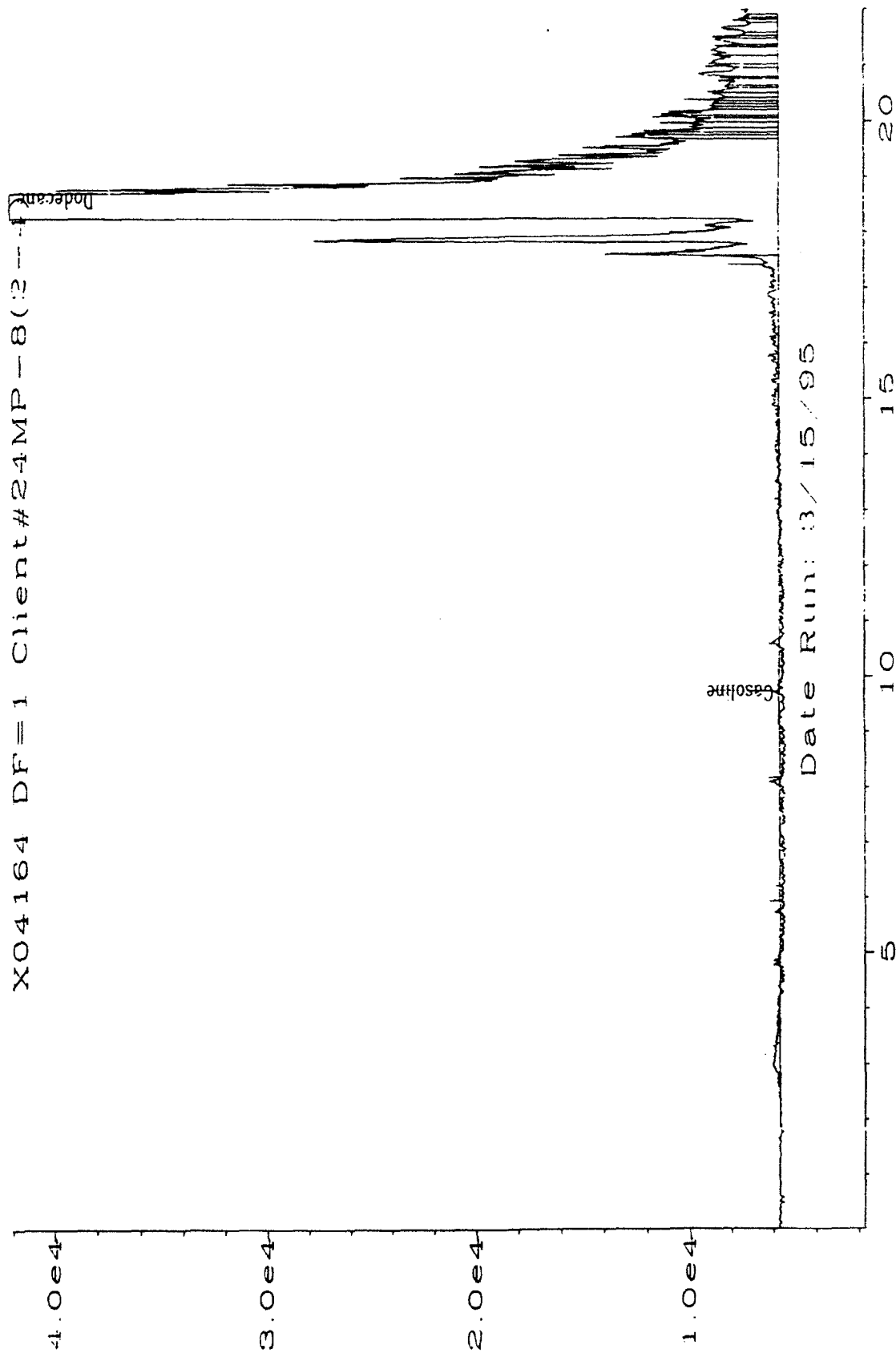
XO4163 DF=1
Client # 24MP-7(2-4)



Sig. 1 in C:\NHPCHEM\1\DATA\TVH0315\NO17F0101.D

3/15/95

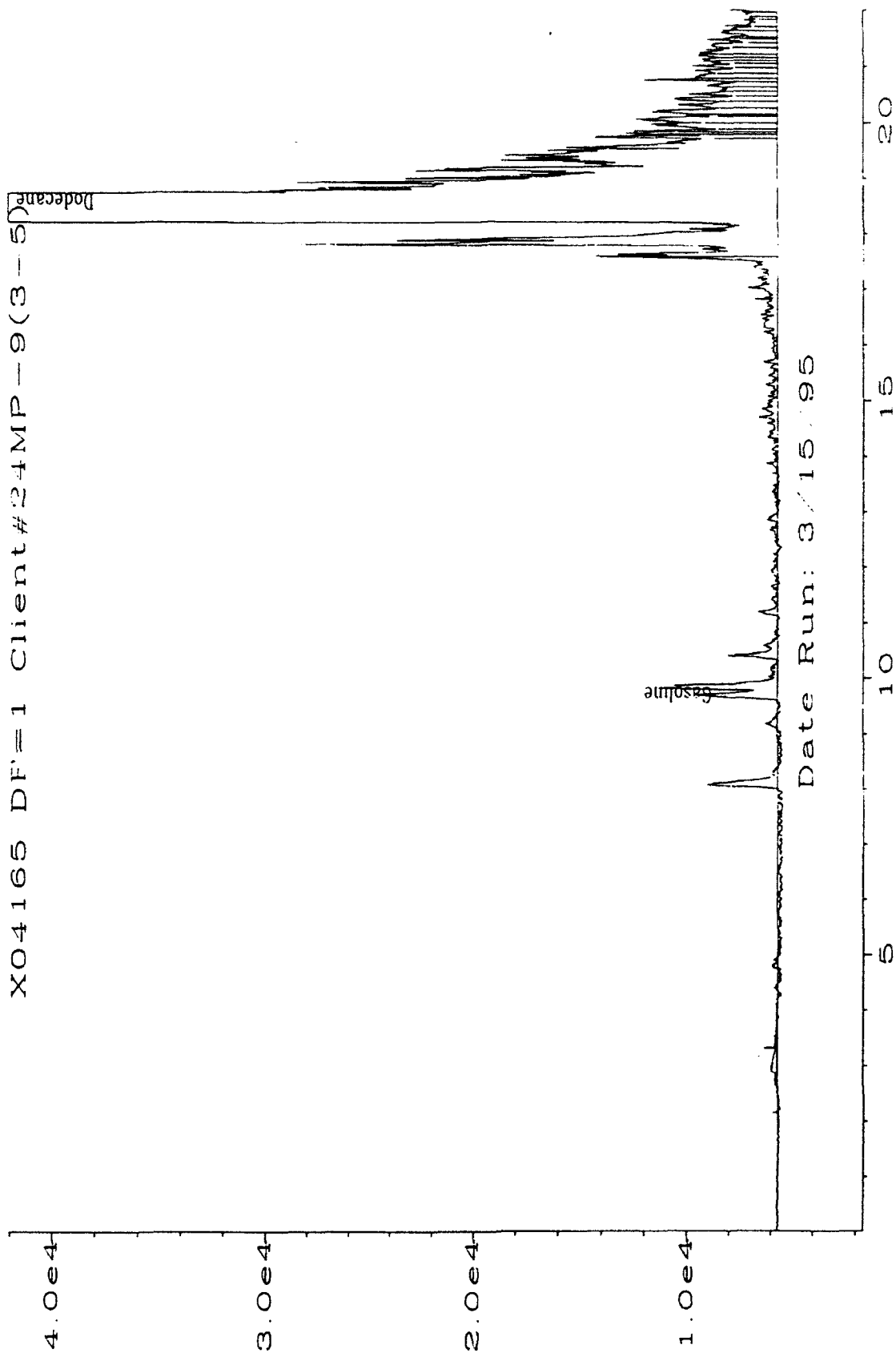
X04164 DF=1 Client#24MP-8(2--1



Sig. 1 in CNHPCHEM1.DATAN\TVH0315\020F0101.D

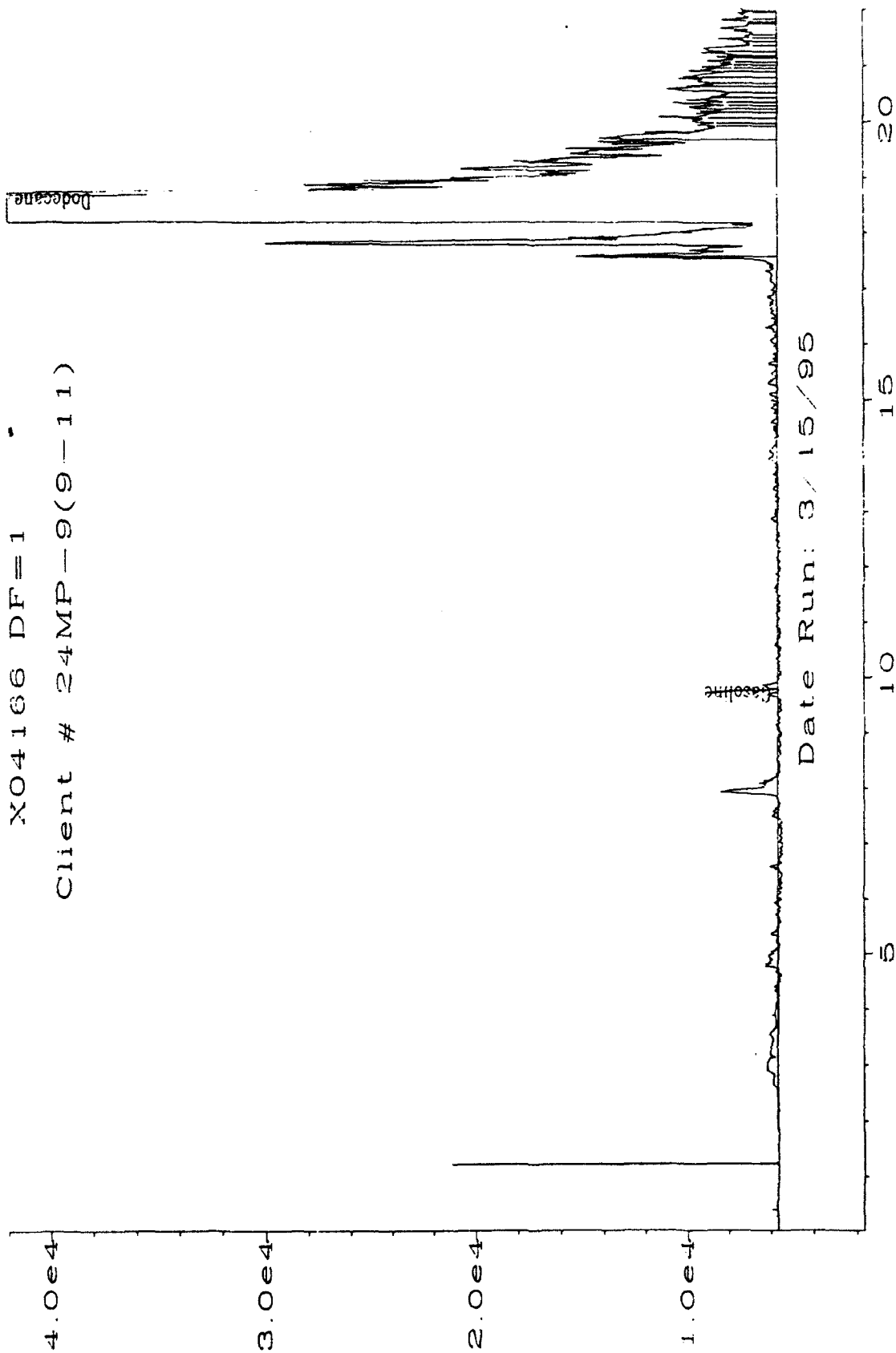
2/30/95

X04165 DF=1 Client #24MP-9(3-5)



Sig. 1 in C:\NHP\CHEM\1\DATA\TVH0315 021FO101.D

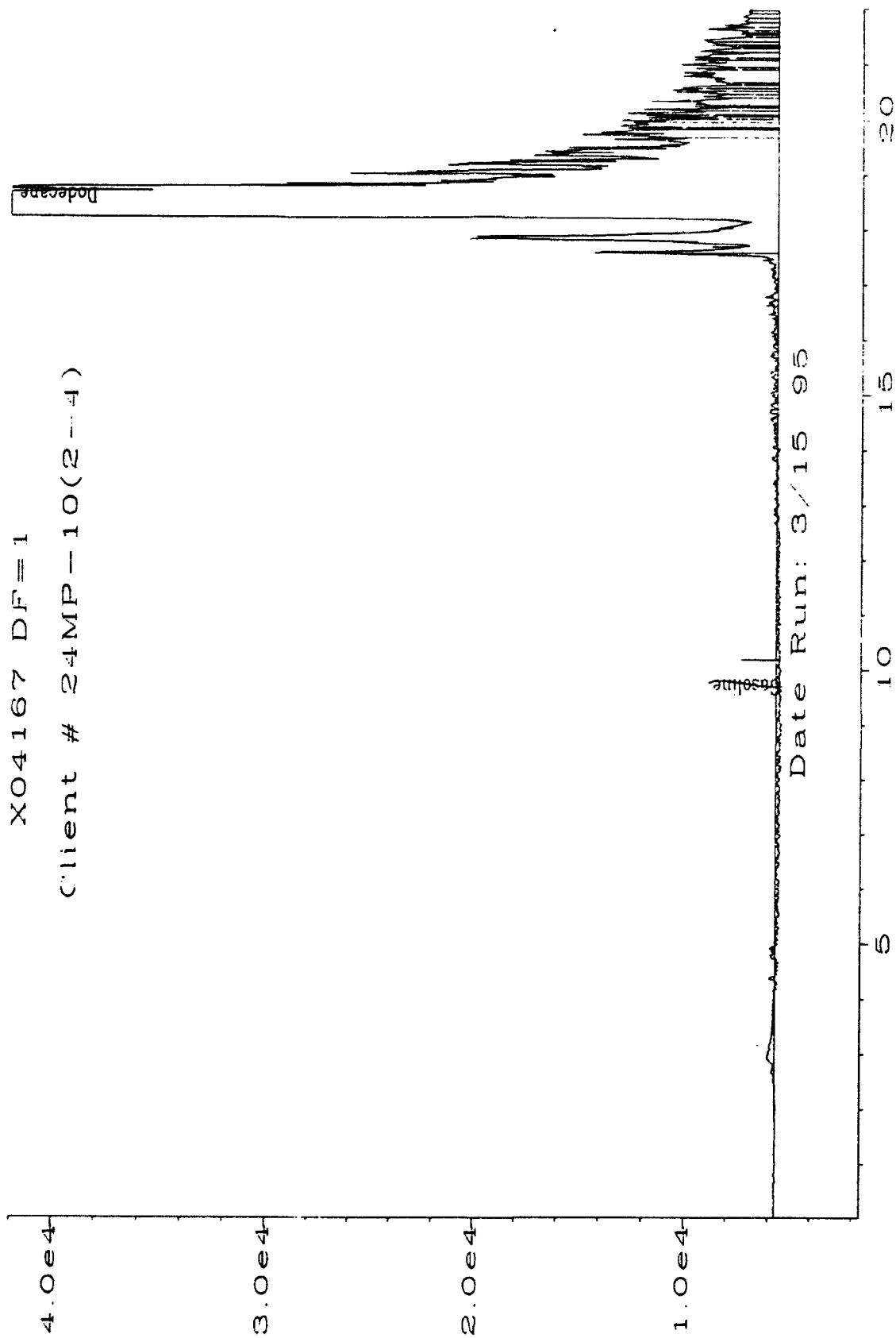
XO4166 DF=1
Client # 24MP-9(9-11)



Sig. 1 in C:\HPCHEM\1\DATA\TVH0315\NO22FO101.D

3/15/95

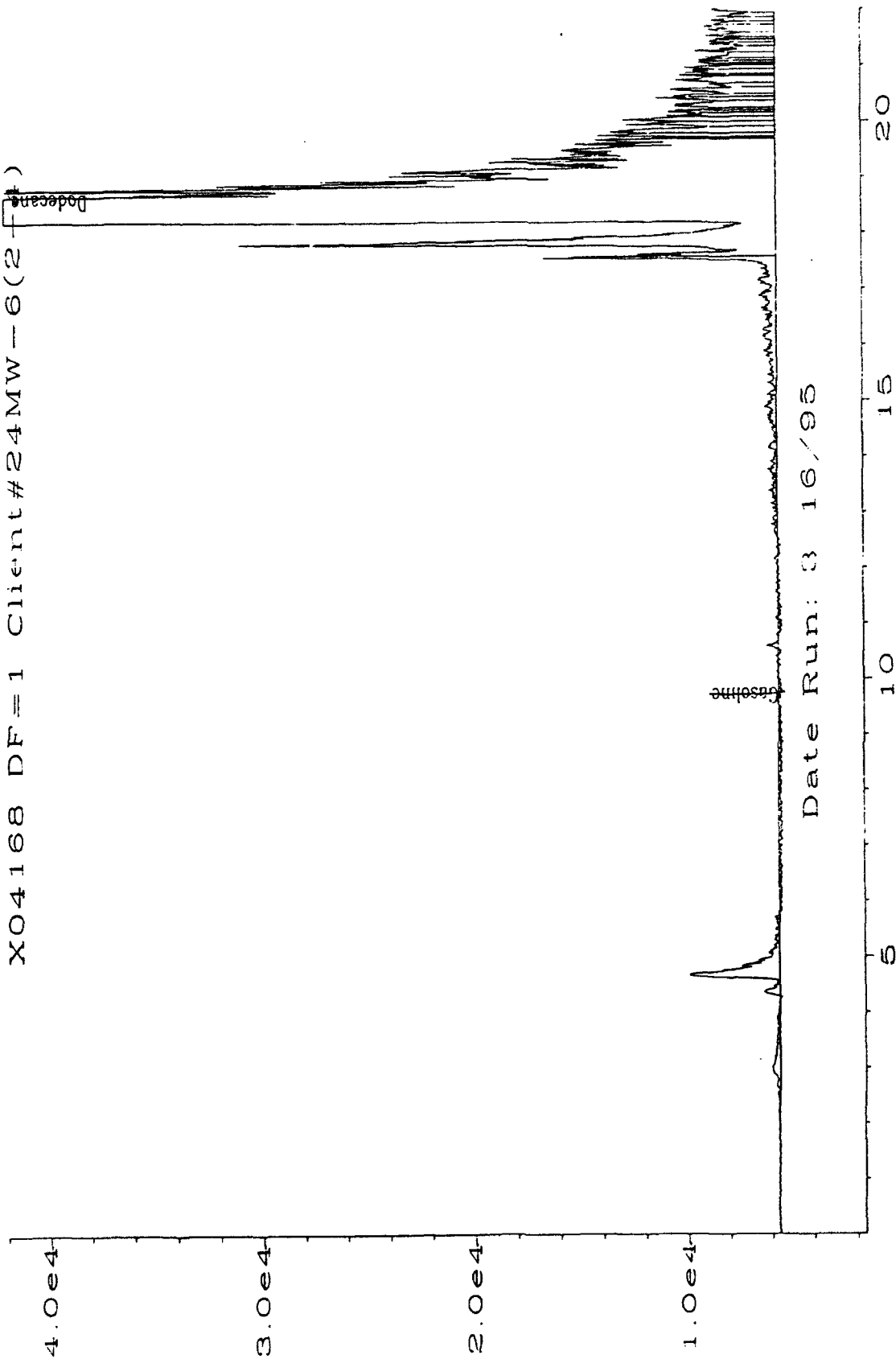
X04167 DF=1
Client # 24MP-10(2-4)



Sig. 1 in C:\HPCHEM\1\DATA\TVH0315\023F0101.D

3/2/95
JH

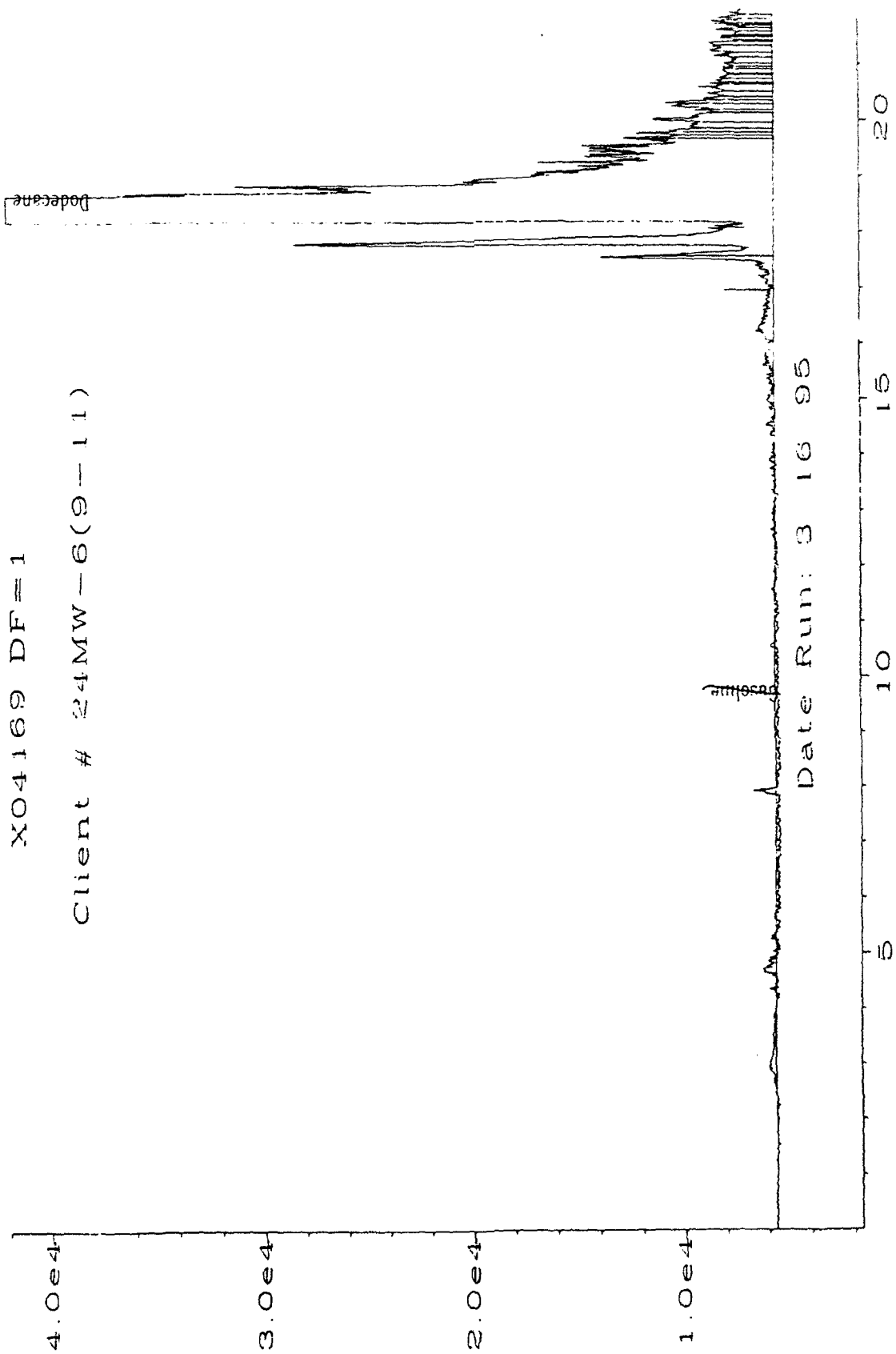
XO4168 DF=1 Client#24MW-6(2)



Sig. 1 in C:\HPCHEM\1\DATA\TVH0315\024F0101.D

3/13/95

XO4169 DF=1
Client # 24MW-6(9-11)



Sig. 1 in CNHPCHEM1NDATANTVH0315-025F0101.D

56/8/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Jet Fuel Boiling Range

Date Sampled : 3/10/95,3/11/95 Client Project Number 722450.21020/MAC DILL
Date Received : 3/14/95
Date Prepared : 3/15,17/95 Lab Project Number : 95-0819
Date Analyzed : 3/18,19,22/95 Matrix : SOIL
Method Number : 3500/8015M

Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH * mg/Kg	RL* mg/Kg
SB031595	SOIL METHOD BLANK	81%	U	10
SB031795	SOIL METHOD BLANK	77%	U	10
X04163	24MP-7(2-4)	73%	U	12
X04164	24MP-8(2-4)	76%	U	12
X04165	24MP-9(3-5)	77%	U	12
X04166	24MP-9(9-11)	78%	U	12
X04167	24MP-10(2-4)	77%	U	12
X04168	24MW-6(2-4)	84%	U	13
X04169	24MW-6(9-11)	81%	U	12
X04170	175MP-1(3-5)	81%	U	12

QUALIFIERS

U = TEH analyzed for but not detected.

B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

RL = Reporting Limit

* = Based on dry weight

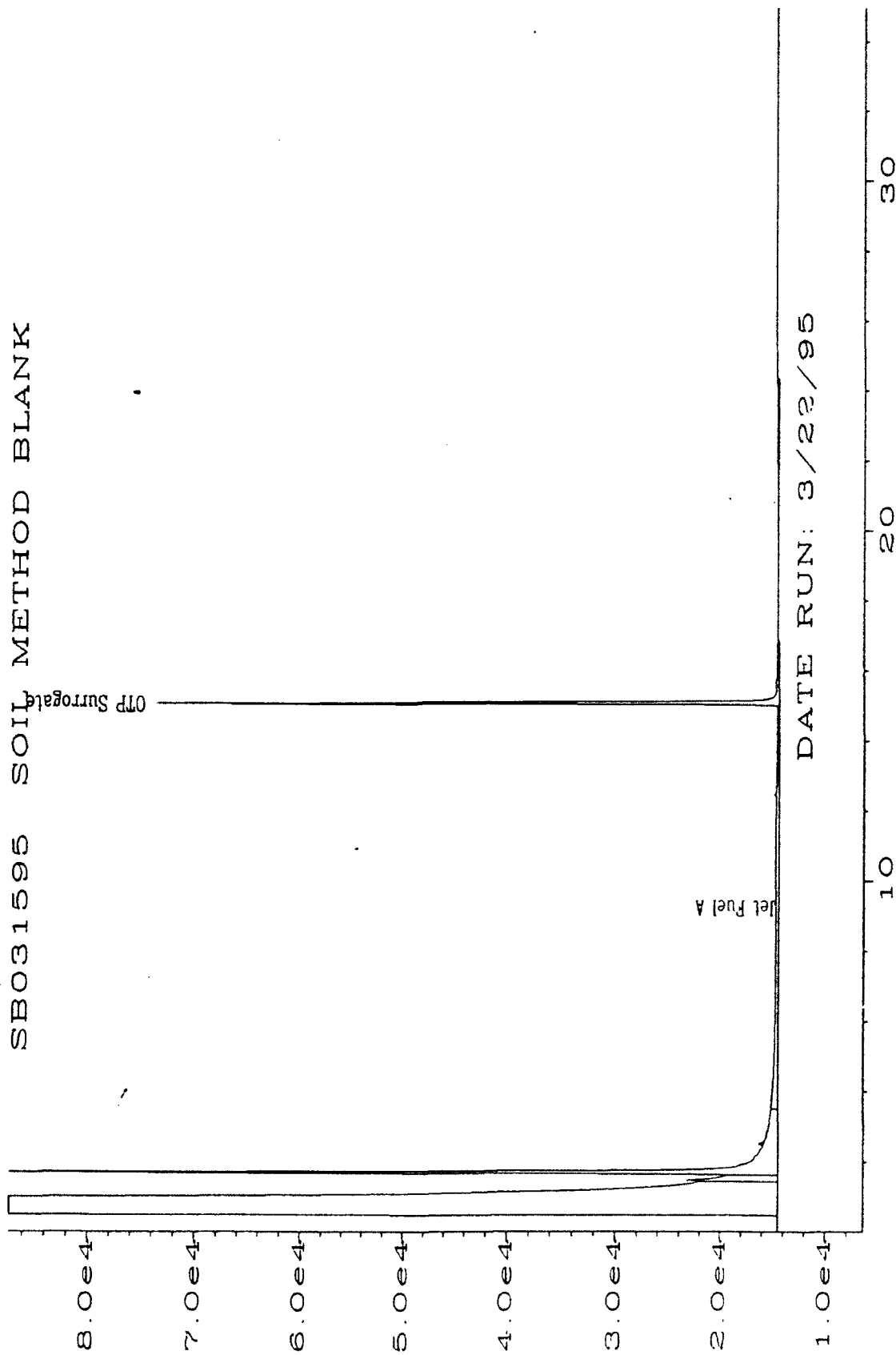
Analyst

K. Cone

Approved

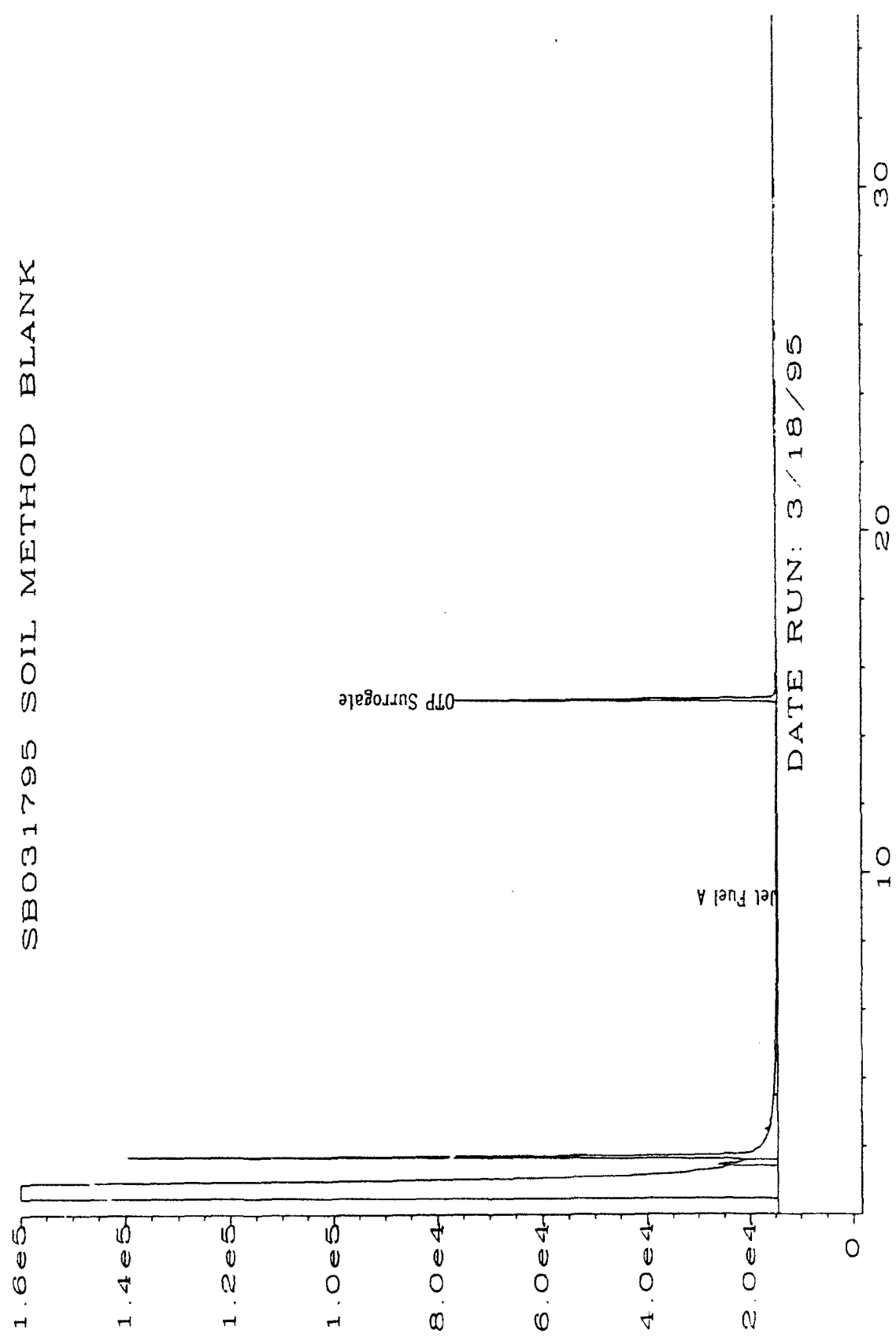
Amclilla

SB031595 SOIL METHOD BLANK



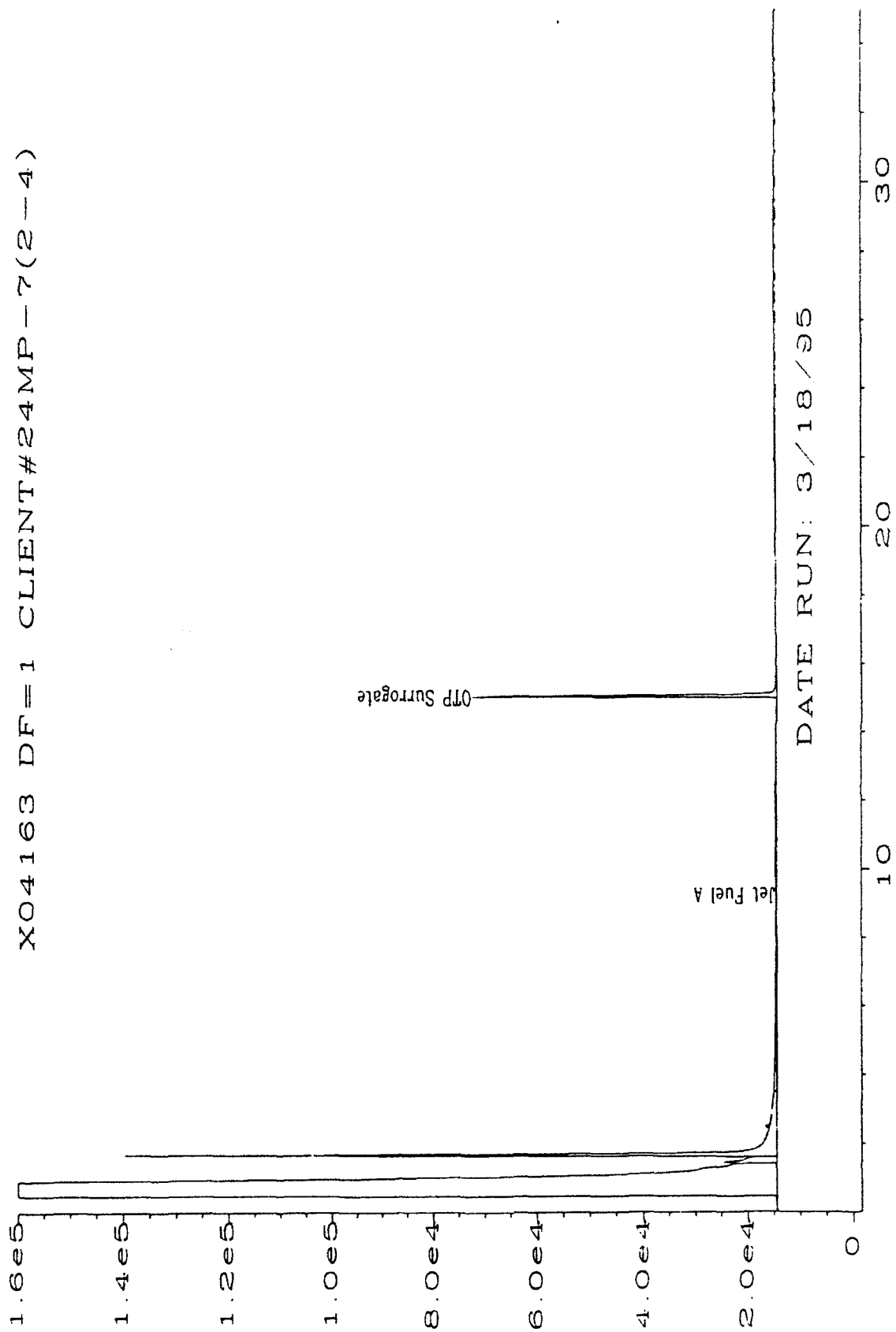
Sig. 2 in C:\HPCHEM\2\D. ANTEH0321\024R0101.D

SBO31795 SOIL METHOD BLANK



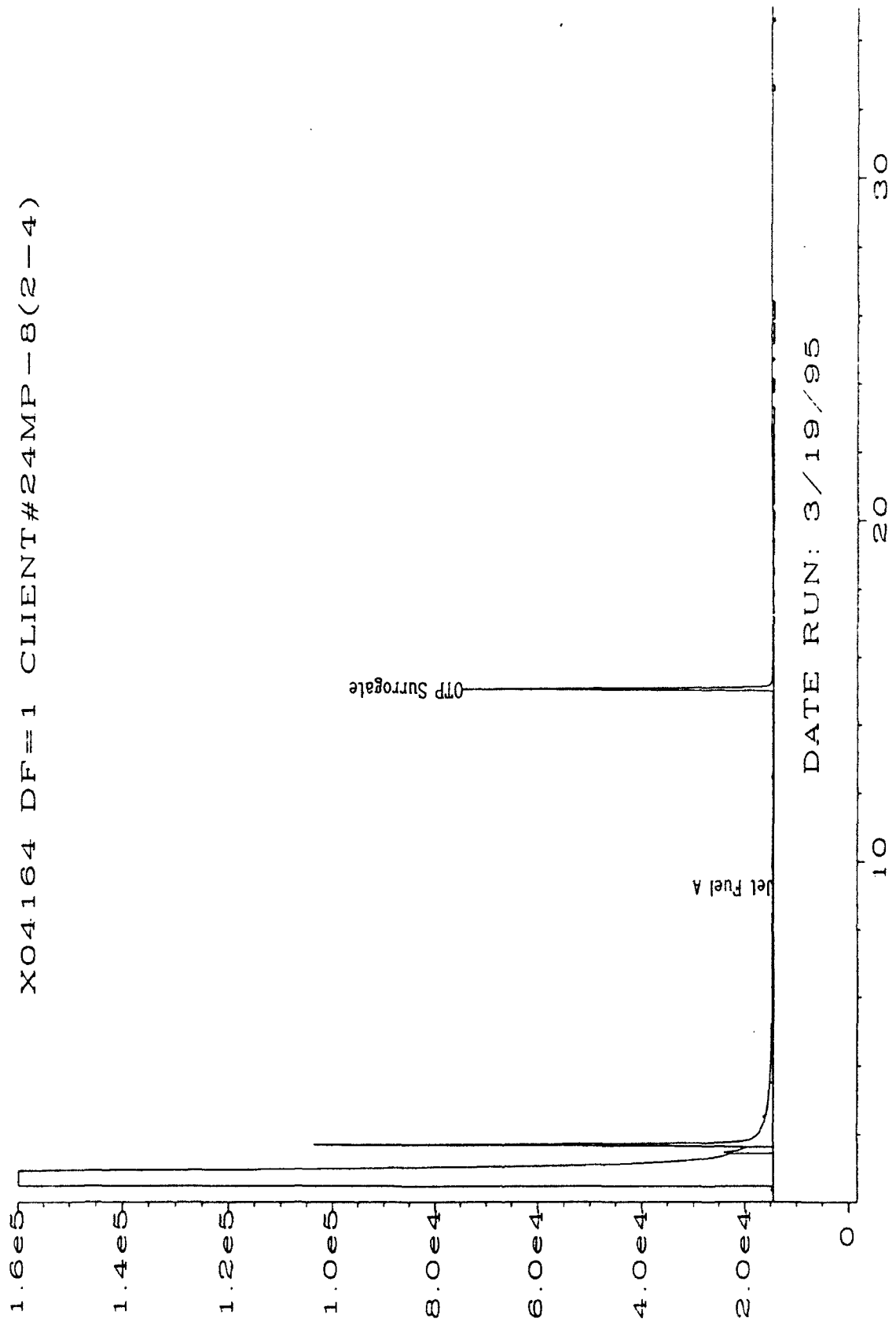
Sig. 2 in C:\HPCHEM\2\DATA\TEH0317\040R0101.D

X04163 DF=1 CLIENT#24MP-7(2-4)



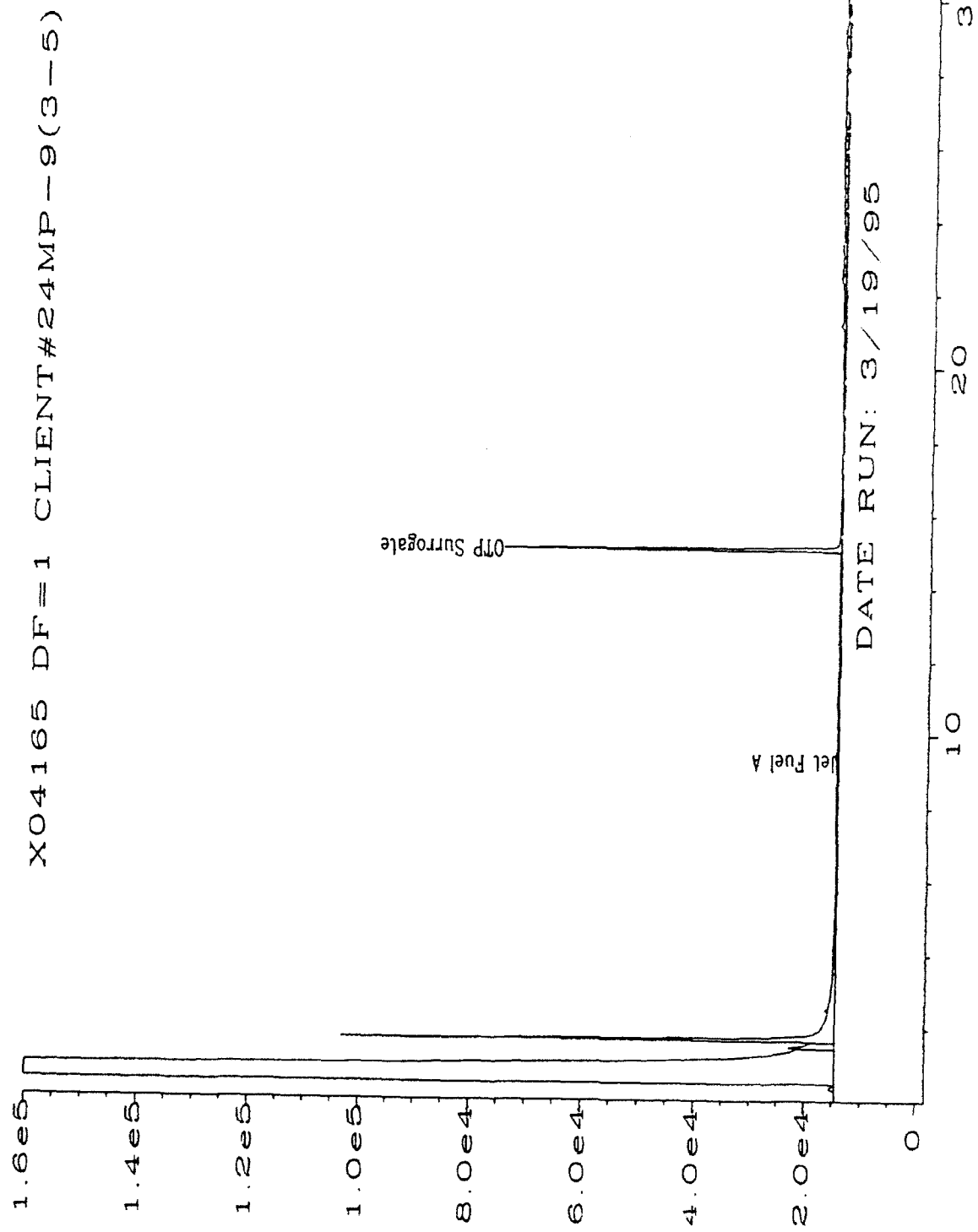
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X04164 DF=1 CLIENT#24MP-8(2-4)



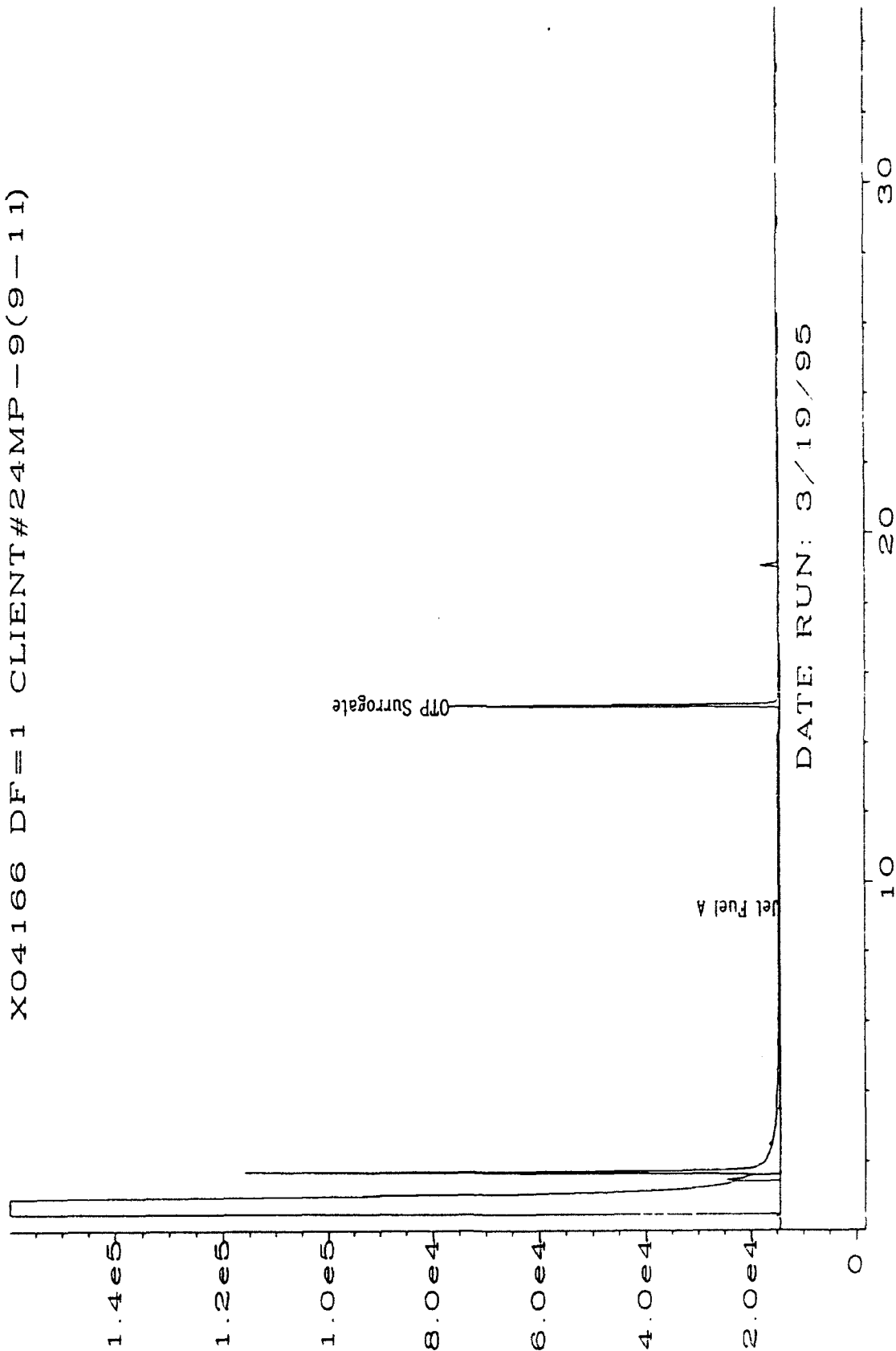
DATE RUN: 3/19/95

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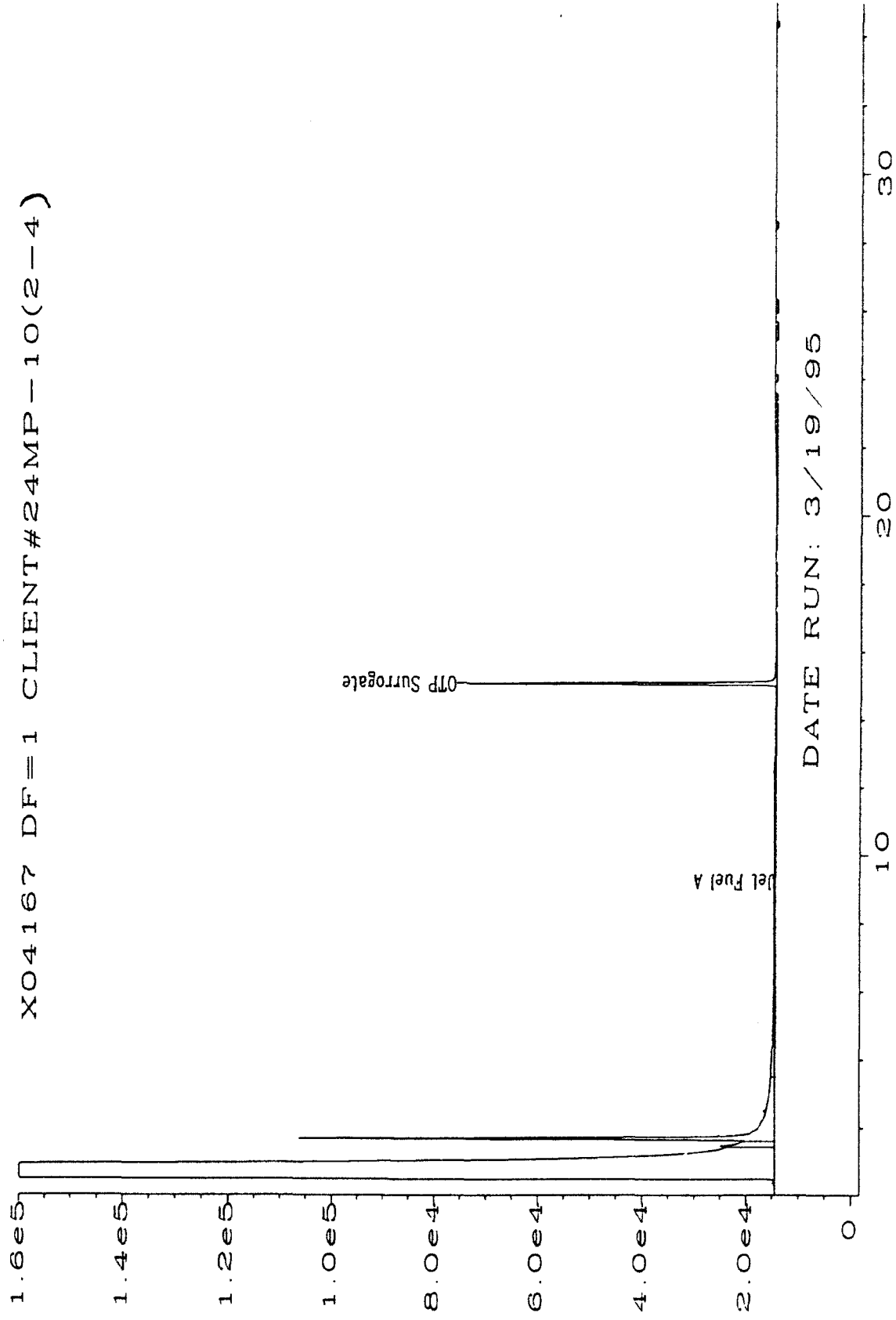
Sig. 2 in C:\NHPCHEM\2\DA' ANTEHO317\046R0101.D

X04166 DF=1 CLIENT#24MP-9(9-11)



Sig. 2 in C:\HPCHEM\2\DATA\TEH0317 048R0101.D

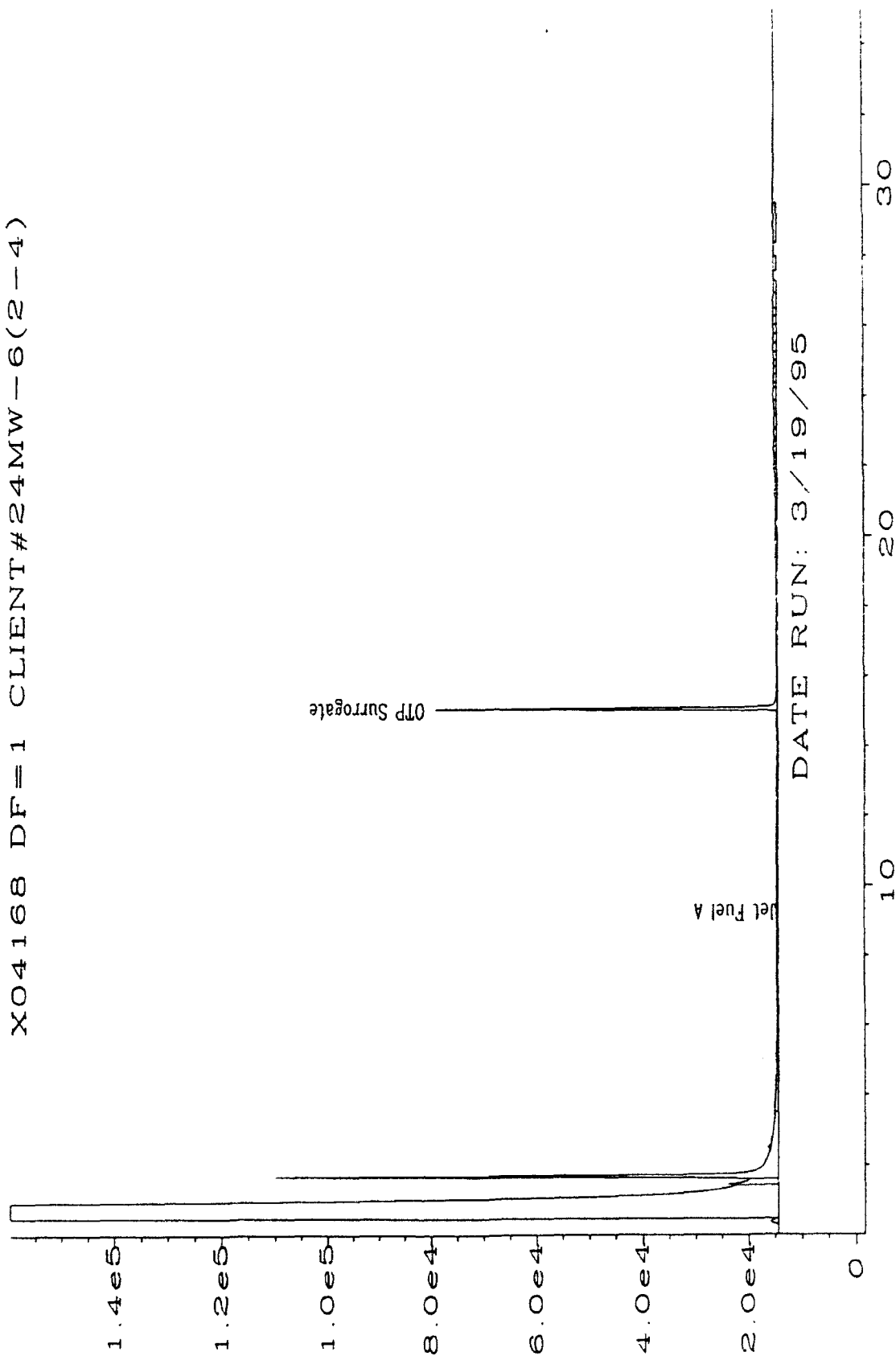
X04167 DF=1 CLIENT#24MP-10(2-4)



DATE RUN: 3/19/95

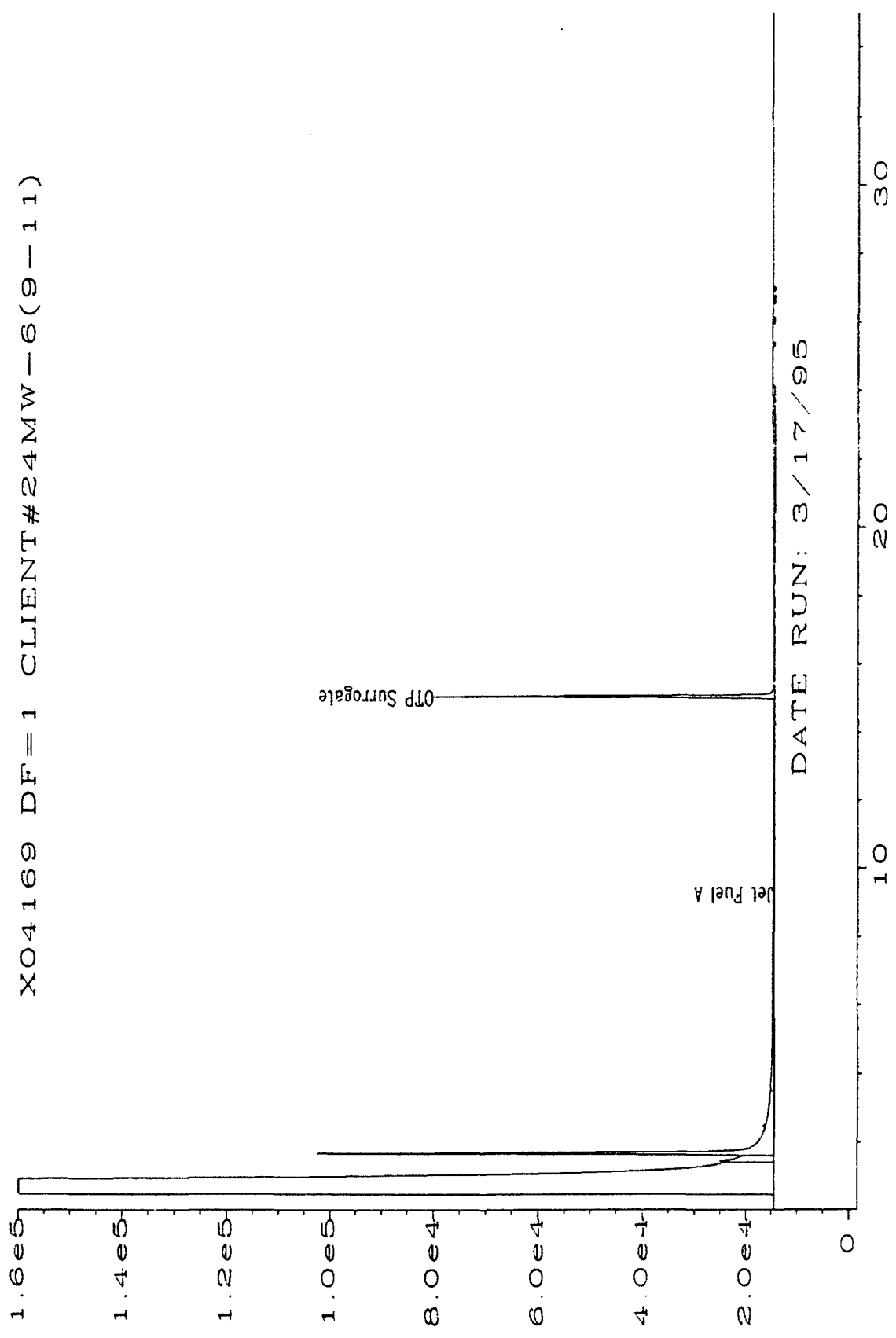
Sig. 2 in C:\HPCHEM\2\DATA\ANTEH0317\049R0101.D

X04168 DF=1 CLIENT#24MW-6(2-4)



Sig. 2 in C:\HPCHEM\2\DATA\TEH0317\050R0101.D

X04169 DF=1 CLIENT#24MW-6(9-11)



Sig. 2 in C:\HPCHEM\2\DATA\TEH0317\051R0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number	: LCS031595	Client Project Number	: 722450.21020/MAC DILL
Date Prepared	: 3/15/95	Lab Project Number	: 95-0819
Date Analyzed	: 3/18/95	Matrix	: SOIL
Sequence Number	: TEH0317021	Method Number	: 3500/Mod. 8015

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/Kg</u>	<u>QC Limit mg/Kg</u>
JET FUEL	1000	960	750-1750

QUALIFIERS

U = TEH analyzed for but not detected.

B = TEH found in blank as well as sample (blank data should be compared).

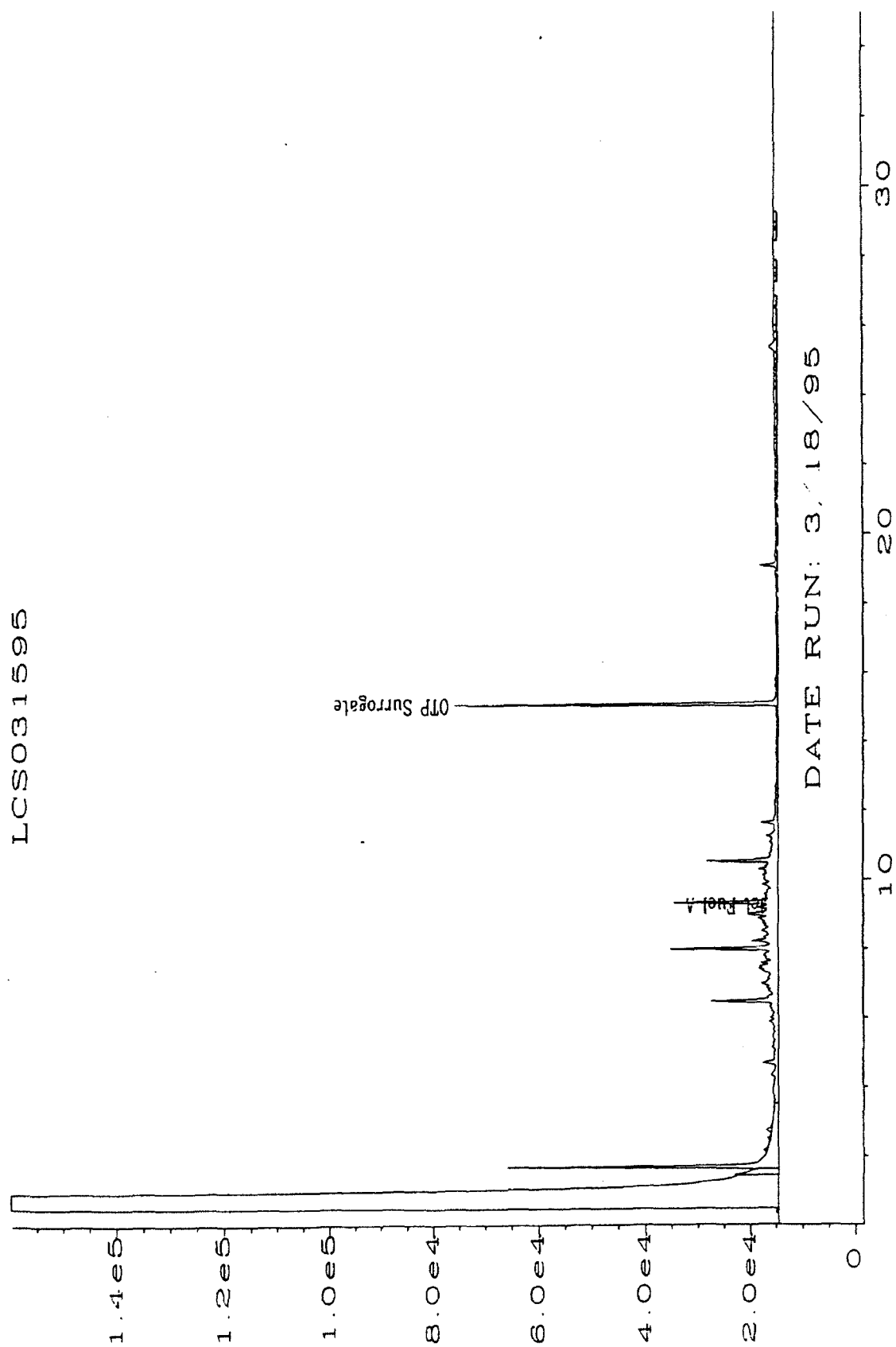
E = Extrapolated value.

NA = Not Available.

K. Cone
Analyst

Amella
Approved

LCS031595



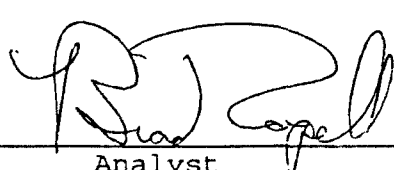
Sig. 2 in C:\HPCHEM\2ND. \ANTEH0317\021R0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

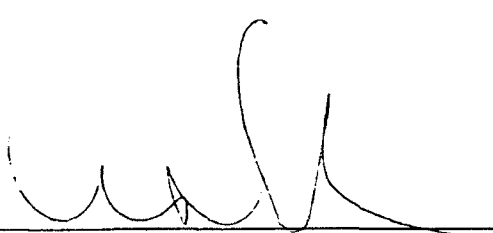
Miscellaneous Analyses

Date Sampled : 3/10,11/95 Client Project ID. : 722450.21020
Date Received : 3/14/95 Lab Project No. : 95-0819
Date Prepared : 3/15/95 Matrix : Soil
Date Analyzed : 3/15/95 Method : EPA 160.3

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Moisture (%)</u>
X04163	24MP-7 (2-4)	17.2
X04164	24MP-8 (2-4)	18.7
X04165	24MP-9 (3-5)	18.6
X04166	24MP-9 (9-11)	18.3
X04167	24MP-10 (2-4)	16.7
X04168	24MW-6 (2-4)	20.8
X04169	24MW-6 (9-11)	18.0
X04170	175MP-1 (3-5)	14.4



Analyst



Approved

0819tm.4

HUFFMAN

LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS

Date: 03/24/95

Lab Name: Huffman Labs

Contact: Sue Zeller

Sample Matrix: soil

Client: Evergreen Analytical

Contact: Patty McClellan

Huffman Lab #: 143595

Client Smp#	Lab ID #	Element/Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Instrument
75SS-4 (3-4)	14359501	TC	NA	<0.05	%	NA	03/23/95	2.195	Leco CR12	#7
75SS-4 (3-4)	14359501	TC	NA	<0.05	%	NA	03/23/95	2.067	Leco CR12	#7
75SS-6 (3-5)	14359502	TC	NA	<0.05	%	NA	03/23/95	2.154	Leco CR12	#7
75MP-7 (4-6)	14359503	TC	NA	<0.05	%	NA	03/23/95	3.332	Leco CR12	#7
75MP-17 (4-6)	14359504	TC	NA	<0.05	%	NA	03/23/95	2.888	Leco CR12	#7
24MP-7 (2-4)	14359505	TC	NA	<0.05	%	NA	03/23/95	3.555	Leco CR12	#7
24MP-3 (3-5)	14359506	TC	NA	0.21	%	NA	03/23/95	3.331	Leco CR12	#7
24MP-4 (3-5)	14359507	TC	NA	0.13	%	NA	03/23/95	2.908	Leco CR12	#7
24MP-6 (4-6)	14359508	TC	NA	2.21	%	NA	03/23/95	3.093	Leco CR12	#7
24MP-16 (4-6)	14359509	TC	NA	0.73	%	NA	03/23/95	3.394	Leco CR12	#7
75SS-4 (3-4)	14359501	CC	NA	<0.02	%	NA	03/21/95	0.111	COU-02	"tower"
75SS-4 (3-4)	14359501	CC	NA	<0.02	%	NA	03/21/95	0.259	COU-02	"tower"
75SS-6 (3-5)	14359502	CC	NA	<0.02	%	NA	03/21/95	0.185	COU-02	"tower"
75MP-7 (4-6)	14359503	CC	NA	<0.02	%	NA	03/21/95	0.248	COU-02	"tower"
75MP-17 (4-6)	14359504	CC	NA	<0.02	%	NA	03/21/95	0.221	COU-02	"tower"
24MP-7 (2-4)	14359505	CC	NA	<0.02	%	NA	03/21/95	0.127	COU-02	"tower"
24MP-3 (3-5)	14359506	CC	NA	<0.02	%	NA	03/21/95	0.130	COU-02	"tower"
24MP-4 (3-5)	14359507	CC	NA	<0.02	%	NA	03/21/95	0.128	COU-02	"tower"
24MP-6 (4-6)	14359508	CC	NA	<0.02	%	NA	03/21/95	0.138	COU-02	"tower"
24MP-16 (4-6)	14359509	CC	NA	<0.02	%	NA	03/21/95	0.165	COU-02	"tower"
<hr/>										
75SS-4 (3-4)	14359501	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
75SS-4 (3-4)	14359501	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
0871 75SS-6 (3-5)	14359502	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
75MP-7 (4-6)	14359503	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
75MP-17 (4-6)	14359504	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
0819 24MP-7 (2-4)	14359505	17.24 TOC	NA	<0.05	0.06 %	NA	NA	NA	by calc	NA
24MP-3 (3-5)	14359506	TOC	NA	0.21	%	NA	NA	NA	by calc	NA
0820 24MP-4 (3-5)	14359507	TOC	NA	0.13	%	NA	NA	NA	by calc	NA
24MP-6 (4-6)	14359508	TOC	NA	2.21	%	NA	NA	NA	by calc	NA
24MP-16 (4-6)	14359509	TOC	NA	0.73	%	NA	NA	NA	by calc	NA

Samples analyzed and results reported on an as received basis.

Soil samples are not homogeneous.

Values reported below Detection Limits are for reference only.

TC detection limit = 0.05%

CC detection limit = 0.02%

TOC detection limit = 0.05%

The numbers to the left above represent the last four digits of the EAL project number under which the samples were analyzed.

The original report and quality control results are filed with EAL project 95-C

HUFFMAN

LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS

Date: 03/24/95

Lab Name: Huffman Labs

Contact: Sue Zeller

Sample Matrix: soil

Client: Evergreen Analytical

Contact: Patty McClellan

Huffman Lab #: 143595

Client Smp#	Lab ID #	Element/Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Instrument ID
75SS-4 (3-4)	14359501	TC	NA	<0.05	%	NA	03/23/95	2.195	Leco CR12	#7
75SS-4 (3-4)	14359501	TC	NA	<0.05	%	NA	03/23/95	2.067	Leco CR12	#7
75SS-6 (3-5)	14359502	TC	NA	<0.05	%	NA	03/23/95	2.154	Leco CR12	#7
75MP-7 (4-6)	14359503	TC	NA	<0.05	%	NA	03/23/95	3.332	Leco CR12	#7
75MP-17 (4-6)	14359504	TC	NA	<0.05	%	NA	03/23/95	2.888	Leco CR12	#7
24MP-7 (2-4)	14359505	TC	NA	<0.05	%	NA	03/23/95	3.555	Leco CR12	#7
24MP-3 (3-5)	14359506	TC	NA	0.21	%	NA	03/23/95	3.331	Leco CR12	#7
24MP-4 (3-5)	14359507	TC	NA	0.13	%	NA	03/23/95	2.908	Leco CR12	#7
24MP-6 (4-6)	14359508	TC	NA	2.21	%	NA	03/23/95	3.093	Leco CR12	#7
24MP-16 (4-6)	14359509	TC	NA	0.73	%	NA	03/23/95	3.394	Leco CR12	#7
75SS-4 (3-4)	14359501	CC	NA	<0.02	%	NA	03/21/95	0.111	COU-02	"tower"
75SS-4 (3-4)	14359501	CC	NA	<0.02	%	NA	03/21/95	0.259	COU-02	"tower"
75SS-6 (3-5)	14359502	CC	NA	<0.02	%	NA	03/21/95	0.185	COU-02	"tower"
75MP-7 (4-6)	14359503	CC	NA	<0.02	%	NA	03/21/95	0.248	COU-02	"tower"
75MP-17 (4-6)	14359504	CC	NA	<0.02	%	NA	03/21/95	0.221	COU-02	"tower"
24MP-7 (2-4)	14359505	CC	NA	<0.02	%	NA	03/21/95	0.127	COU-02	"tower"
24MP-3 (3-5)	14359506	CC	NA	<0.02	%	NA	03/21/95	0.130	COU-02	"tower"
24MP-4 (3-5)	14359507	CC	NA	<0.02	%	NA	03/21/95	0.128	COU-02	"tower"
24MP-6 (4-6)	14359508	CC	NA	<0.02	%	NA	03/21/95	0.138	COU-02	"tower"
24MP-16 (4-6)	14359509	CC	NA	<0.02	%	NA	03/21/95	0.165	COU-02	"tower"
75SS-4 (3-4)	14359501	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
75SS-4 (3-4)	14359501	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
75SS-6 (3-5)	14359502	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
75MP-7 (4-6)	14359503	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
75MP-17 (4-6)	14359504	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
24MP-7 (2-4)	14359505	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
24MP-3 (3-5)	14359506	TOC	NA	0.21	%	NA	NA	NA	by calc	NA
24MP-4 (3-5)	14359507	TOC	NA	0.13	%	NA	NA	NA	by calc	NA
24MP-6 (4-6)	14359508	TOC	NA	2.21	%	NA	NA	NA	by calc	NA
24MP-16 (4-6)	14359509	TOC	NA	0.73	%	NA	NA	NA	by calc	NA

Samples analyzed and results reported on an as received basis.

Soil samples are not homogeneous.

Values reported below Detection Limits are for reference only.

TC detection limit = 0.05%

CC detection limit = 0.02%

TOC detection limit = 0.05%

HUFFMAN

LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS LABORATORY CONTROL STANDARD

Date: 03/24/95
Lab Name: Huffman Labs
Contact: Sue Zeller

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 143595

LABORATORY CONTROL STANDARD

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
LCS	BN 4851	TC	3.35	3.41	102	%	03/23/95	Leco CR12	#7
LCS	BN 4056	CC	11.33	11.32	100	%	03/21/95	COU-02	"tower"

SPIKE RECOVERY

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
SPIKE	BN 4712	TC	12960	14089	109	ug C	03/23/95	Leco CR12	#7
SPIKE DUP	BN 4712	TC	14520	15357	106	ug C	03/23/95	Leco CR12	#7
SPIKE	BN 4712	CC	1080	1086	101	ug C	03/21/95	COU-02	"tower"
SPIKE DUP	BN 4712	CC	1167	1168	100	ug C	03/21/95	COU-02	"tower"

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Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

NON-CLP QA/QC ANALYSIS RESULTS

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Date: 03/24/95 Client: Evergreen Analytical
Lab Name: Huffman Labs Contact: Patty McClellan
Contact: Sue Zeller Huffman Lab #: 143595

INITIAL CALIBRATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
ICS	BN 4712	TC	12.00	11.92	99	%	03/23/95	Leco CR12	#7
ICS	BN 4712	CC	12.00	11.96	100	%	03/21/95	COU-02	"tower"

Slope =

NA

Intercept =

NA

Single point calibrations for this test.

95% Correlation Coefficient =

NA

CONTINUING CALIBRATION VERIFICATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
CCS	BN 4712	TC	12.00	12.19	102	%	03/23/95	Leco CR12	#7
CCS	BN 4712	TC	12.00	12.07	101	%	03/23/95	Leco CR12	#7
CCS	BN 4712	TC	12.00	11.81	98	%	03/23/95	Leco CR12	#7
CCS	BN 4712	CC	12.00	11.96	100	%	03/21/95	COU-02	"tower"
CCS	BN 4712	CC	12.00	11.92	99	%	03/21/95	COU-02	"tower"
CCS	BN 4712	CC	12.00	11.93	99	%	03/21/95	COU-02	"tower"
CCS	BN 4712	CC	12.00	11.97	100	%	03/21/95	COU-02	"tower"

4630 Indiana Street • Golden, CO 80403

BALANCE # 19

BN 4851

4. ARM WAS OKAL (BOOK SAYS TO RECAL + CHECK FOR LEAKS/RESTRICTIONS)
SURPOSE DN 3743 (TRY +2.10)

1 Indiana Street • Golden, CO 80403

BALANCE # 19

BN 4851

ANALYST <i>not printed</i>	DATE <i>3-23-95</i>	REVIEWED <i>Sy</i>	DATE <i>3/24/95</i>	PAGE <i>2</i> OF <i>3</i>
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HUFFMAN

LABORATORIES, INC.
Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

ANALYSIS : TOTAL CARBON	METHOD : HIGH TEMP COMB. - INFRARED DET.
INSTRUMENT : LECO CR12	ANALYZER # 7
BALANCE # 19	

STD. CALCIUM CARBONATE	STD. N.I.S.T. BUFFALO RIVER SEDIMENT (BRS)
12.00 %C (theory) BN 4712	3.348 %C (theory) BN 4651

SAMPLE #	SAMPLE WT G		% CARBON PRE-CALIB	% CARBON POST-CALIB		QC	% REC.
143501	1.000			0.001		IR	
143501	2.195			0.041		DUP ± 2.50% OF MEAN	
143501	2.067			0.039			
143501	2.138			(0.659)			
+SPIKE CaCO ₃	0.108			—			
143501	2.026			(0.758)			
+SPIKE CaCO ₃	0.121			—			
143502	2.154			0.045			
143503	3.3320			0.043			
143504	2.888			0.036			
143505	3.555			0.043			
143506	3.331			0.213			
BRS	0.316			3.436		CCS	102.6
CaCO ₃	0.115			12.07		CCS	100.5
BL	1.000			0.004		IB	
143507	2.908	(NH)		0.126			
143508	3.093			2.213			
143509	3.394			0.727			
BRS	0.249			3.437		CCS	102.7
CaCO ₃	0.134			11.81		CCS	98.4

ANALYST J. H. HUFFMAN	DATE 3-23-95	REVIEWED S.	DATE 3/24/95	PAGE 3 OF 3
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HUFFMAN

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4630 Indiana Street • Golden, CO 80403

ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COULOMETER #	Tower
BALANCE #	10		

CALCIUM CARBONATE (STD # J33) CaCO ₃	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na ₂ CO ₃	BOTTLE # 4056	% C THEORY = 11.33 %
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SAMPLE NO.	TARE WT. GRAMS	TARE + SAMPLE WT.	SAMPLE WT. GRAMS	NOTES	COUNTS U GRAMS	LESS BLANK	% CARBON AS CARBONATE CARBON	% RECOVERY
Blank			—		6.2		IB	
Bot #1			—		6.4		MB	
[REDACTED]								
#CaCO ₃	0.602094	0.611777	0.009683		1164.8	1153.8	11.96	ICS 99.63% rec
#Na ₂ CO ₃	0.601000	0.611682	0.010682		1215.4	1209.4	11.32	LCS 99.93% rec
[REDACTED]								
[REDACTED]								
#CaCO ₃	0.549270	0.560589	0.011319		1360.3	1354.3	11.96	CCS 99.71% rec
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
[REDACTED]								
1435-01	0.543314	0.654615	0.111301		7.1	1.1	0.001	
1435-01	0.565839	0.824428	0.258589		8.5	2.5	0.001	dup
#CaCO ₃	0.585053	0.599070	0.014017		1676.7	1670.7	11.92	CCS 99.33% rec
went to lunch								
#CaCO ₃	0.625218	0.636989	0.011771		1410.2	1404.2	11.93	CCS 99.41% rec
#CaCO ₃	0.673700	0.682700	0.009000					
1435-01	0.558872	0.673700	0.114828		1092.0	1086.0	100.45% rec	spike (see spike chart)

ANALYST Tom Herman	DATE 3-21-95	REVIEWED S	DATE 2/22/95	PAGE 1 OF 2
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REMOVED 110352

ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COLUMETER #	Tower
BALANCE #	10		

CALCIUM CARBONATE (STD 1333) CaCO ₃	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na ₂ CO ₃	BOTTLE # 4056	% C THEORY = 11.33
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SAMPLE NO.	TARE WT. GRAMS	TARE + SAMPLE WT.	SAMPLE WT. GRAMS	NOTES	COUNTS U GRAMS	LESS BLANK <u>6</u>	% CARBON AS CARBONATE CARBON	% RECOVERY
(+ CaCO ₃)	0.535211	0.544936	0.009725					
1435-01	0.544936	0.710449	0.165513		1174.4	1162.4	99.98%	recapitate dup for replicate
1435-02	0.618251	0.809001	0.184750		7.8	1.8	0.001	
1435-03	0.615765	0.864216	0.248451		8.4	2.4	0.001	
1435-04	0.544121	0.764340	0.220699		8.2	2.2	0.001	
1435-05	0.564375	0.690941	0.126566		7.3	1.3	0.001	
1435-06	0.582620	0.712407	0.129787		6.8	0.8	0.001	
1435-07	0.557046	0.684879	0.127833		7.2	1.2	0.001	
# CaCO ₃	0.670446	0.810591			1269.4	1263.4	11.93	CCS 99.41 %
1435-08	0.506013	0.644224	0.138211		8.5	2.5	0.002	
1435-09	0.543937	0.709064	0.165127		7.5	1.5	0.001	



CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Project #: 95-0983

Parsons Engineering Science, Inc. (PES) Project: MacDill AFB
(722450.21020)

Sample Receipt

On March 28, 1995, 22 water samples and one trip blank were received in good condition at EAL with the following discrepancies: 1. Holding times for samples 24PZ-1S, 24PZ-1D, 24MP-6S and MD32-3 for Nitrate/Nitrite analyses had expired prior to sample shipment; the chain of custody requested the trip blank be analyzed for BTEX, TVH, alkalinity, anions and TOC. The laboratory was instructed by John Hicks of PES to proceed with the anion analyses and to analyze the trip blank for BTEX.

Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

BTEX, Water Matrix, Method 602

Samples 24PZ-1S, 56MP-5S and MW56-10 were analyzed at dilutions due to contaminant beyond the linear range of the instrument. The reporting limits were raised accordingly. Samples 56MP-4S and MW56-6 were originally analyzed within holding times at a dilution factor of 100 due to target analytes. Toluene was still beyond the linear range so the samples were re-run at a dilution factor of 250 outside holding times. The original data is reported with extrapolated values for toluene.

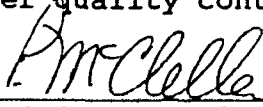
There were no other quality control anomalies to report.

Total Volatile Hydrocarbons (TVH), Water Matrix, Method 8015M

The sequence for samples 56MP-15D (laboratory duplicate), MW56-10 and 56MP-7D was initiated before the holding time expired, however, the analyses were completed shortly after midnight. There were no other quality control anomalies to report.

General Chemistry

The holding times for samples 24PZ-1S, 24PZ-1D, 24MP-6S and MD32-3 for Nitrate/Nitrite expired prior to sample receipt. There were no other quality control anomalies to report.


Patricia A. McClellan, Project Manager

Evergreen Analytical Sample Log Sheet

Project # 95-0983

Date(s) Sampled: 03/24,26,27/95 COC

Date Due: 03/31-BTEX,TVH
04/11 OTHERS

Date Received: 03/28/95 0930

Holding Time(s): 03/26,28,29-NO₂,1
04/7,9,10-BTEX,TVH,ALKALINIT

Client Project I.D. 722450.21020/MAC DILL

Rush STANDARD

Client: Parsons Engineering Science, Inc.

Shipping Charges N/A

Address: 1700 Broadway Suite 900

E.A. Cooler # 263

Denver, CO 80290

Airbill # FED EX

Contact: TODD WIEDEMEIER

Custody Seal Intact? Y

Client P.O. _____

Cooler X Bottles _____

Phone #831-8100 Fax #831-8208

COC Present Y

Sample Tags Present? Y

Sample Tags Listed? Y

Sample(s) Sealed? Y

Special Invoicing/Billing

Special Instructions * ALL BTEX ARE TO INCLUDE CHLOROBENZENE, TMB AND TEMB

* AN MS/MSD AND LAB DUPLICATE IS TO BE ANALYZED ON ALL PES PROJECTS.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04848A/B	24 PZ-1S	* BTEX 602	W	40V	2
X04849A/B	24 PZ-1D	* BTEX 602	W	40V	2
X04850A/B	24 MP-6S	* BTEX 602	W	40V	2
X04851A/B	MD 32-3	* BTEX 602	W	40V	2
X04852A/B	MW 56-10	* BTEX 602	W	40V	2
X04853A/B	56 MP-6D	* BTEX 602	W	40V	2
X04854A/B	56 MP-6S	* BTEX 602	W	40V	2
X04855A/B	MW 56-1	* BTEX 602	W	40V	2
X04856A/B	MW 56-21	* BTEX 602	W	40V	2
X04857A/B	56 MP-8S	* BTEX 602	W	40V	2
X04858A/B	56 MP-10S	* BTEX 602	W	40V	2
X04859A/B	MW 56-2	* BTEX 602	W	40V	2
X04860A/B	MW 56-8	* BTEX 602	W	40V	2
X04861A/B	MW 56-9	* BTEX 602	W	40V	2
X04862A/B	56 MP-4S	* BTEX 602	W	40V	2
X04863A/B	MW 56-12	* BTEX 602	W	40V	2
X04864A/B	MW 56-6	* BTEX 602	W	40V	2

R=Sample to be returned

Route GC/MS GC 3 Metals Wet Chem 2 SxPrep Acctg 1
To SxRec C QA/QC C Sales C File Orig

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
04865A/B	56 MP-5S	* BTEX 602	W	40V	2
X04866A/B	56 MP-5D	* BTEX 602	W	40V	2
X04867A/B	56 MP-15D	* BTEX 602	W	40V	2
X04868A/B	MW 56-10	* BTEX 602	W	40V	2
X04869A/B	56 MP-7D	* BTEX 602	W	40V	2
X04870A/B	TRIP BLANK	* BTEX 602	W	40V	2
X04848C/D	24 PZ-1S	TVPH	W	40V	2
X04849C/D	24 PZ-1D	TVPH	W	40V	2
X04850C/D	24 MP-6S	TVPH	W	40V	2
X04851C/D	MD 32-3	TVPH	W	40V	2
X04852C/D	MW 56-10	TVPH	W	40V	2
X04853C/D	56 MP-6D	TVPH	W	40V	2
X04854C/D	56 MP-6S	TVPH	W	40V	2
X04855C/D	MW 56-1	TVPH	W	40V	2
X04856C/D	MW 56-21	TVPH	W	40V	2
X04857C/D	56 MP-8S	TVPH	W	40V	2
X04858C/D	56 MP-10S	TVPH	W	40V	2
04859C/D	MW 56-2	TVPH	W	40V	2
X04860C/D	MW 56-8	TVPH	W	40V	2
X04861C/D	MW 56-9	TVPH	W	40V	2
X04862C/D	56 MP-4S	TVPH	W	40V	2
X04863C/D	MW 56-12	TVPH	W	40V	2
X04864C/D	MW 56-6	TVPH	W	40V	2
X04865C/D	56 MP-5S	TVPH	W	40V	2
X04866C/D	56 MP-5D	TVPH	W	40V	2
X04867C/D	56 MP-15D	TVPH	W	40V	2
X04868C/D	MW 56-10	TVPH	W	40V	2
X04869C/D	56 MP-7D	TVPH	W	40V	2
X04848E	24 PZ-1S	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04849E	24 PZ-1D	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04850E	24 MP-6S	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04851E	MD 32-3	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04852E	MW 56-10	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04853E	56 MP-6D	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
04854E	56 MP-6S	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04855E	MW 56-1	ANIONS	W	125P	CR3
X04856E	MW 56-21	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CP3
X04857E	56 MP-8S	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04858E	56 MP-10S	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04859E	MW 56-2	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04860E	MW 56-8	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04861E	MW 56-9	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04862E	56 MP-4S	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04863E	MW 56-12	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04864E	MW 56-6	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04865E	56 MP-5S	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04866E	56 MP-5D	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04867E	56 MP-15D	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04868E	MW 56-10	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04869E	56 MP-7D	ANIONS Cl, SO ₄ , NO ₂ , NO ₃	W	125P	CR3
X04851F	MD 32-3	ALKALINITY	W	250P	CR3
X04853F	56 MP-6D	ALKALINITY	W	250P	CR3
X04854F	56 MP-6S	ALKALINITY	W	250P	CR3
X04866F	56 MP-5D	ALKALINITY	W	250P	CR3
X04867F	56 MP-15D	ALKALINITY	W	250P	CR3
X04868F	MW 56-10	ALKALINITY	W	250P	CR3
X04851G	MD 32-3	TOC	W	125A	CR3
X04850	24 MP-6S	TOC	W	125A	CR3

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.

COMPANY Parsons Engineering Science
 ADDRESS 1700 Broadway, Suite 900
 CITY Denver STATE CO ZIP 80290
 PHONE# 303-831-8100 FAX# 303-831-8100

4036 Youngfield St.
 Wheat Ridge, Colorado 80033
 (303) 425-6021
 FAX (303) 425-6854
 (800) 845-7400



CLIENT CONTACT (print) Todd Williams
 PROJECT I.D. 222450 21020
 EAL QUOTE # PO#
 TURNAROUND REQUIRED* 30 days
 *expedited turnaround subject to additional fee

Sampler Name:

(signature) Mike Vessey
 (print) MIKE VESSEY

Evergreen Analytical Cooler No. 263

Cooler Received

PRINT

Please all information:

CLIENT
 SAMPLE
 IDENTIFICATION

DATE

SAMPLED

TIME

MWS6-10 3/27/95 1310

56MP-70 3/27/95 1345

Trip Blank

ANALYSIS REQUESTED

1-1

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Evergreen Analytical Sample Receipt/Check-in Record

Date & Time Rec'd: 3-28-95 1100 Shipped Via: UPS Fedex
 (Airbill # if applicable)

Client: Eng. Sci.

Client Project ID(s): 722450-21020

EAL Project #(s): 95-0983 EAL Cooler(s): (Y) N

Cooler# 263

Ice packs (Y) N Y N Y N Y N Y N

Temperature °C 4°C

- | | Y | N | N/A |
|--|----------|----------|----------|
| 1. Custody seal(s) present: | <u>X</u> | | |
| Seals on cooler intact | <u>X</u> | | |
| Seals on bottle intact | | | <u>X</u> |
| 2. Chain of Custody present: | <u>X</u> | | |
| 3. Containers broken or leaking: | | <u>X</u> | |
| (Comment on COC if Y) | | | |
| 4. Containers labeled: | <u>X</u> | | |
| 5. COC agrees w/ bottles received: | <u>X</u> | | |
| (Comment on COC if N) | | | |
| 6. COC agrees w/ labels: | <u>X</u> | | |
| (Comment on COC if N) | | | |
| 7. Headspace in VOA vials-waters only | | <u>X</u> | |
| (comment on COC if Y) | | | |
| 8. VOA samples preserved: | <u>X</u> | | |
| 9. pH measured on metals, cyanide or phenolics*: | | | <u>X</u> |
| List discrepancies _____ | | | |
| *Non-EAL provided containers only, water samples only. | | | |
| 10. Metal samples present: | | | <u>X</u> |
| Total _____, Dissolved _____ | | | |
| D or PD to be filtered: | | | |
| T,TR,D,PD to be Preserved: | | | |
| 11. Short holding times: | | <u>X</u> | |
| Specify parameters _____ | | | |
| 12. Multi-phase sample(s) present: | | <u>X</u> | |
| 13. COC signed w/ date/time: | <u>X</u> | | |

Comments: _____

(Additional comments on back)

Custodian Signature/Date: *Foratun 3-28-95*

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-1S	Client Project No.	: 722450.21020/MacDi
Lab Sample Number	: X04848	Lab Project No.	: 95-0983
Date Sampled	: 3/24/95	Dilution Factor	: 1.00
Date Received	: 3/28/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/6/95	Lab File No.	: BX2040522
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	96%	70%-130% (QC limits)
---	-----	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2040612 for noted values, df = 1, 04/06/95

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

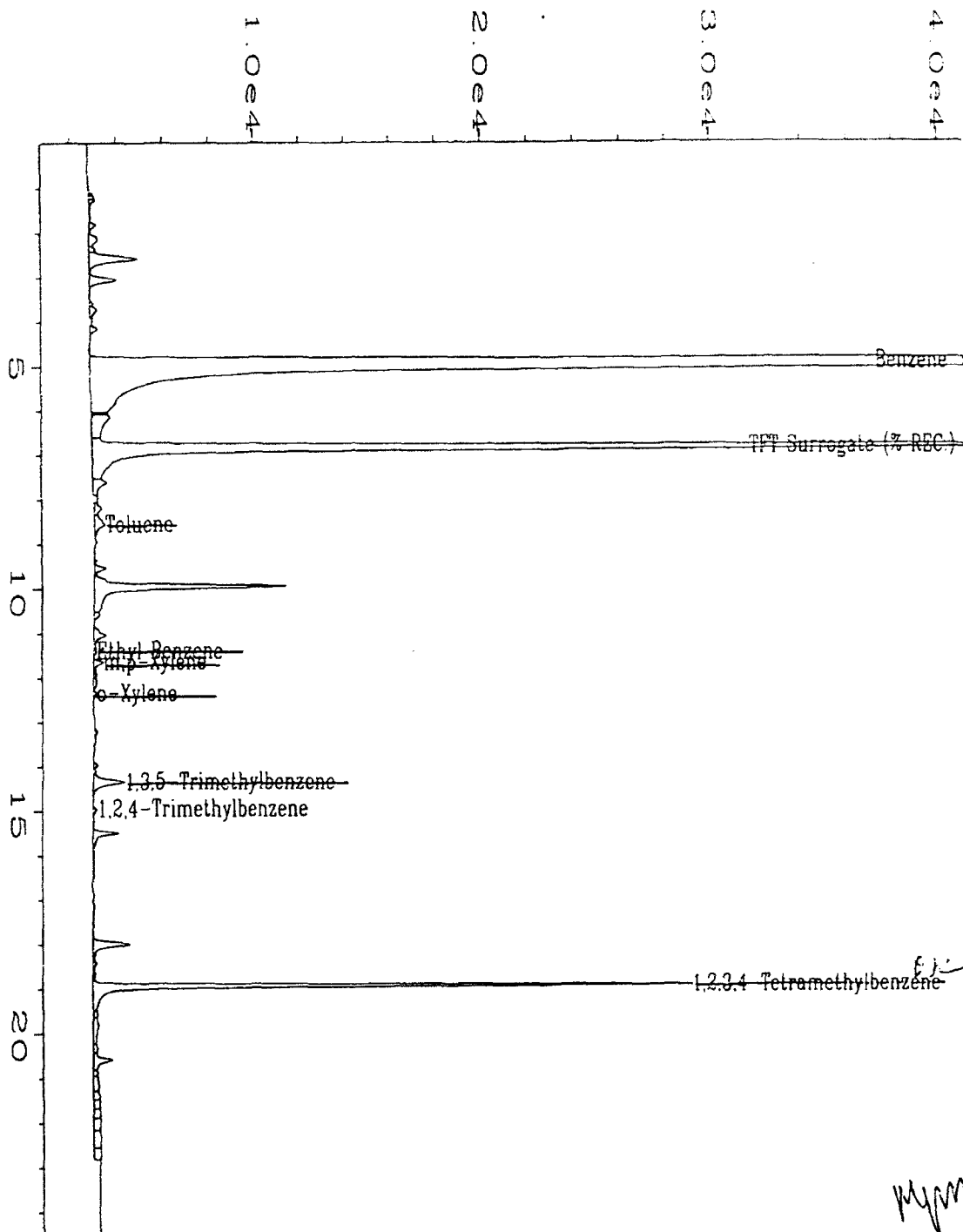
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

M. McMillin
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20405\022R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 22
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04848;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20405.MTH
Required on	: 06 Apr 95 02:15 AM	Analysis Method	: BX20405.MTH
Report Created on:	06 Apr 95 08:39 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0983 Client#: 24 PZ-1S Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-1S	Client Project No.	: 722450.21020/MacDi
Lab Sample Number	: X04848	Lab Project No.	: 95-0983
Date Sampled	: 3/24/95	Dilution Factor	: 10.00
Date Received	: 3/28/95	Method	: 602
Date Prepared	: 4/6/95	Matrix	: Water
Date Analyzed	: 4/6/95	Lab File No.	: BX2040612
		Method Blank No.	: MB040695

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	180	4.0
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**

Surrogate Recovery (α,α,α -Trifluorotoluene): 94% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2040522 for noted values, df = 1, 04/06/95.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

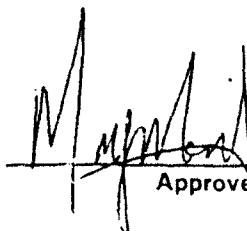
B = Compound also found in the blank.

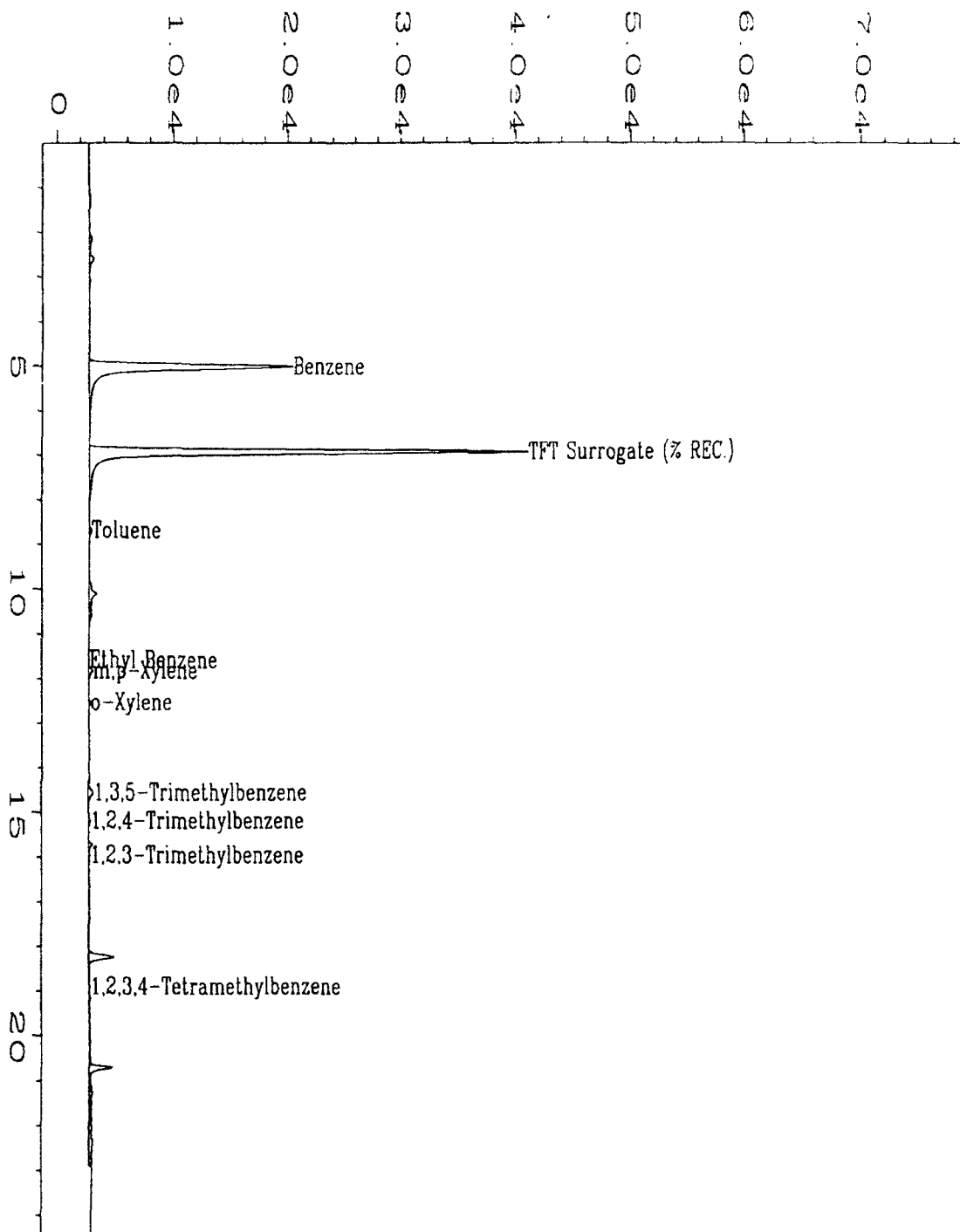
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20406\012R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04648;10;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20406.MTH
quired on	: 06 Apr 95 05:04 PM	Analysis Method	: BX20406B.MTH
Report Created on:	30 Apr 95 08:31 PM	Sample Amount	: 0
Last Recalib on	: 30 APR 95 08:02 PM	ISTD Amount	:
Multiplier	: 10		
Sample Info	: Project#: 95-0983 Client#: 24 PZ-1S Water		

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-1D	Client Project No.	: 722450.21020/MacDill
Lab Sample Number	: X04849	Lab Project No.	: 95-0983
Date Sampled	: 3/24/95	Dilution Factor	: 1.00
Date Received	: 3/28/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/6/95	Lab File No.	: BX2040523
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	2.3	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.6	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	87%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

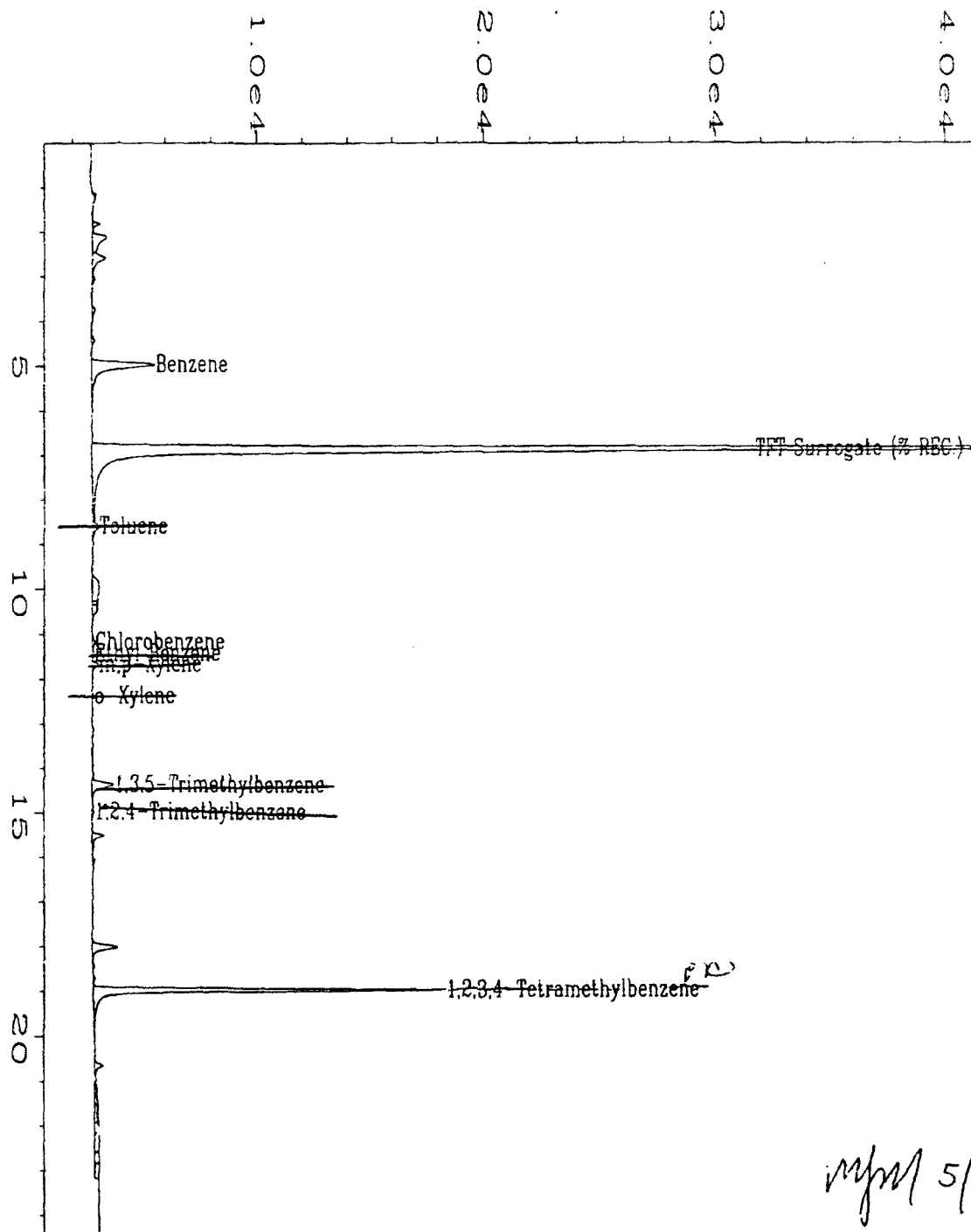
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



mjm 5/1/95

Data File Name	: C:\HPCHEM\2\DATA\BX20405\023R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 23
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04849;1;5	Sequence Line	: 9
in Time Bar Code:		Instrument Method:	: BX20405.MTH
Acquired on	: 06 Apr 95 03:00 AM	Analysis Method	: BX20405.MTH
Report Created on:	: 06 Apr 95 08:40 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0983 Client#: 24 PZ-1D Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-6S/	Client Project No.	: 722450.21020/MacDill
Lab Sample Number	: X04850	Lab Project No.	: 95-0983
Date Sampled	: 3/24/95	Dilution Factor	: 1.00
Date Received	: 3/28/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/6/95	Lab File No.	: BX2040524
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	4.1	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	86%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

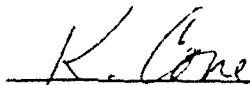
B = Compound also found in the blank.

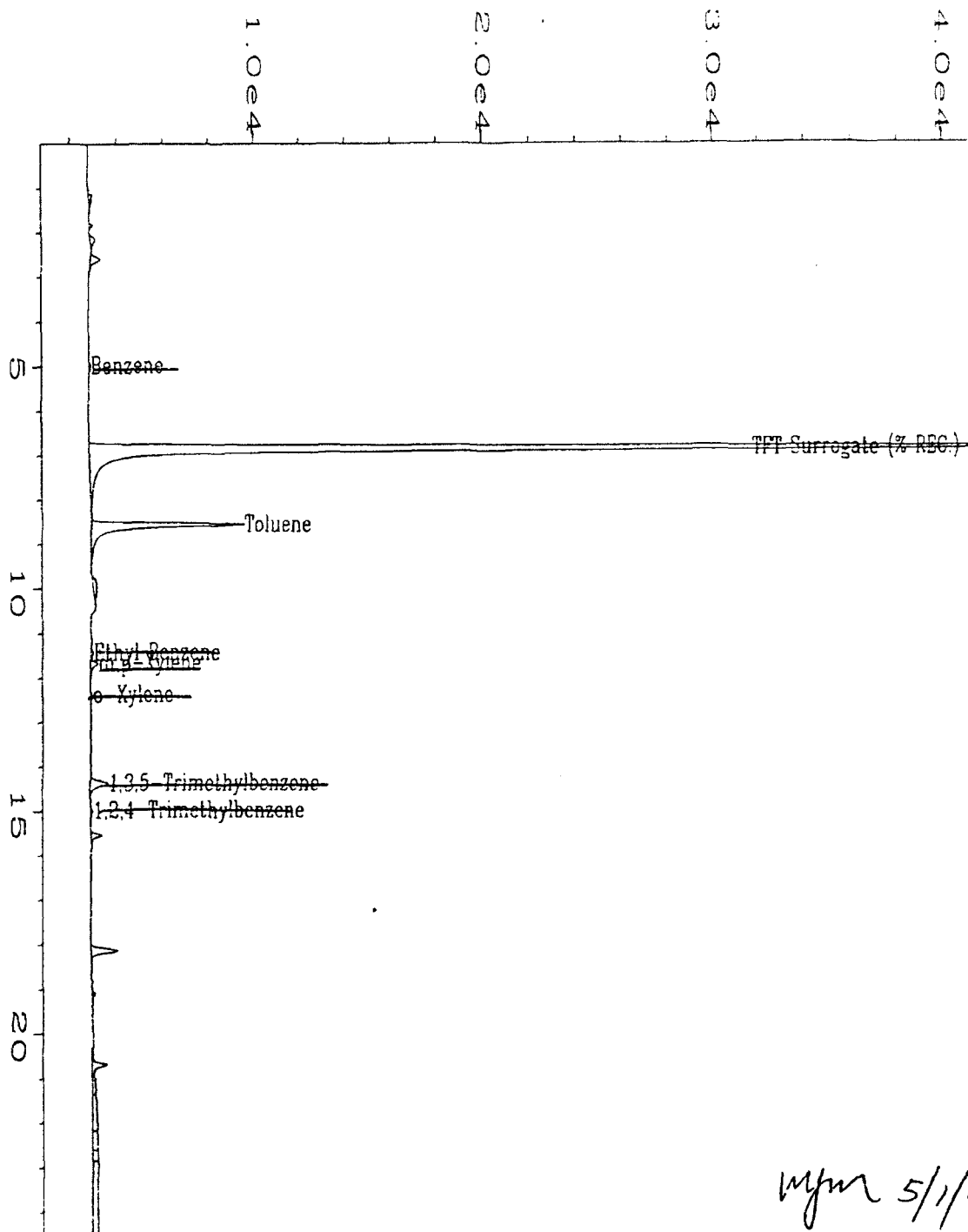
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Wjw 5/1/95

Data File Name	: C:\HPCHEM\2\DATA\BX20405\024R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 24
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04850;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20405.MTH
quired on	: 06 Apr 95 03:47 AM	Analysis Method	: BX20405.MTH
port Created on:	06 Apr 95 08:41 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0983 Client#: 24 MP-6S Water		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW56-10	Client Project No.	: 722450.21020/MacDill
Lab Sample No.	: X04852	Lab Project No.	: 95-0983
Date Sampled	: 3/26/95	EPA Method No.	: 602
Date Received	: 3/28/95	Matrix	: Water
Date Prepared	: 4/6/95	Lab File Number(s)	: BX2040615,16
Date Analyzed	: 4/6/95	Method Blank	: MB040695

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	36.3	54.7	92	50-150
Toluene	20.0	1.1	17.0	80	50-148
Ethyl Benzene	20.0	0.8	16.8	80	50-150
m,p-Xylene	40.0	0.6	37.2	92	50-150
o-Xylene	20.0	0.7	16.5	79	50-150
Chlorobenzene	20.0	4.3	22.0	89	55-135
1,3,5-TMB	20.0	0.0	14.8	74	50-150
1,2,4-TMB	20.0	0.0	16.2	81	50-150
1,2,3-TMB	20.0	0.0	15.4	77	50-1
1,2,3,4-TeMB	20.0	1.8	19.4	88	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20.0	53.6	87	6.2	25	50-150
Toluene	20.0	17.1	80	0.6	25	50-148
Ethyl Benzene	20.0	16.6	79	1.3	25	50-150
m,p-Xylene	40.0	35.7	88	4.2	25	50-150
o-Xylene	20.0	16.3	78	1.3	25	50-150
Chlorobenzene	20.0	21.0	84	5.8	25	55-135
1,3,5-TMB	20.0	14.6	73	1.4	25	50-150
1,2,4-TMC	20.0	15.7	79	3.1	25	50-150
1,2,3-TMB	20.0	15.0	75	2.6	25	50-150
1,2,3,4-TeMB	20.0	18.4	83	5.8	25	50-150

* = Values outside of QC limits.

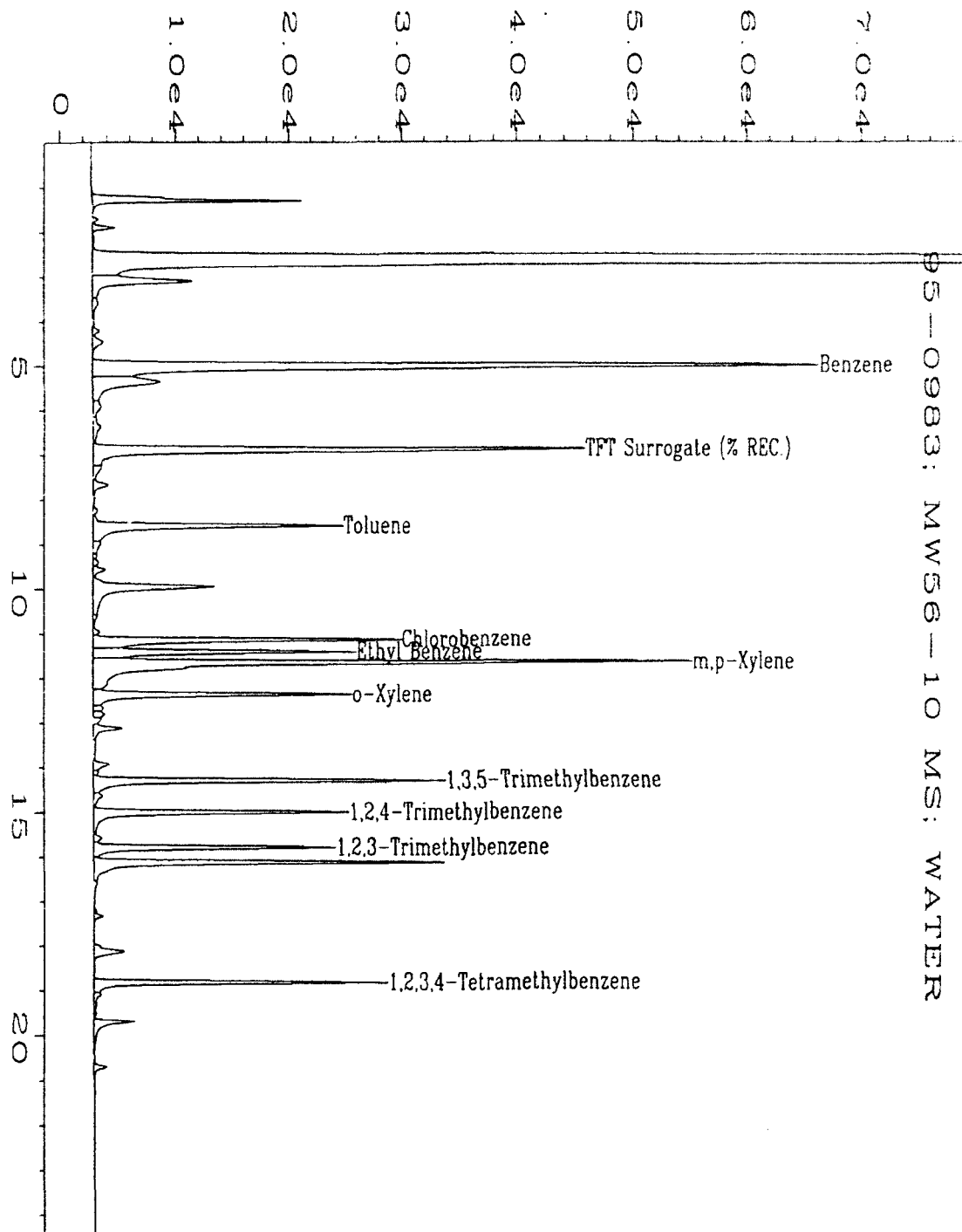
RPD: 0 out of (10) outside limits.

Spike Recovery: 0 out of (20) outside limits.

Comments:

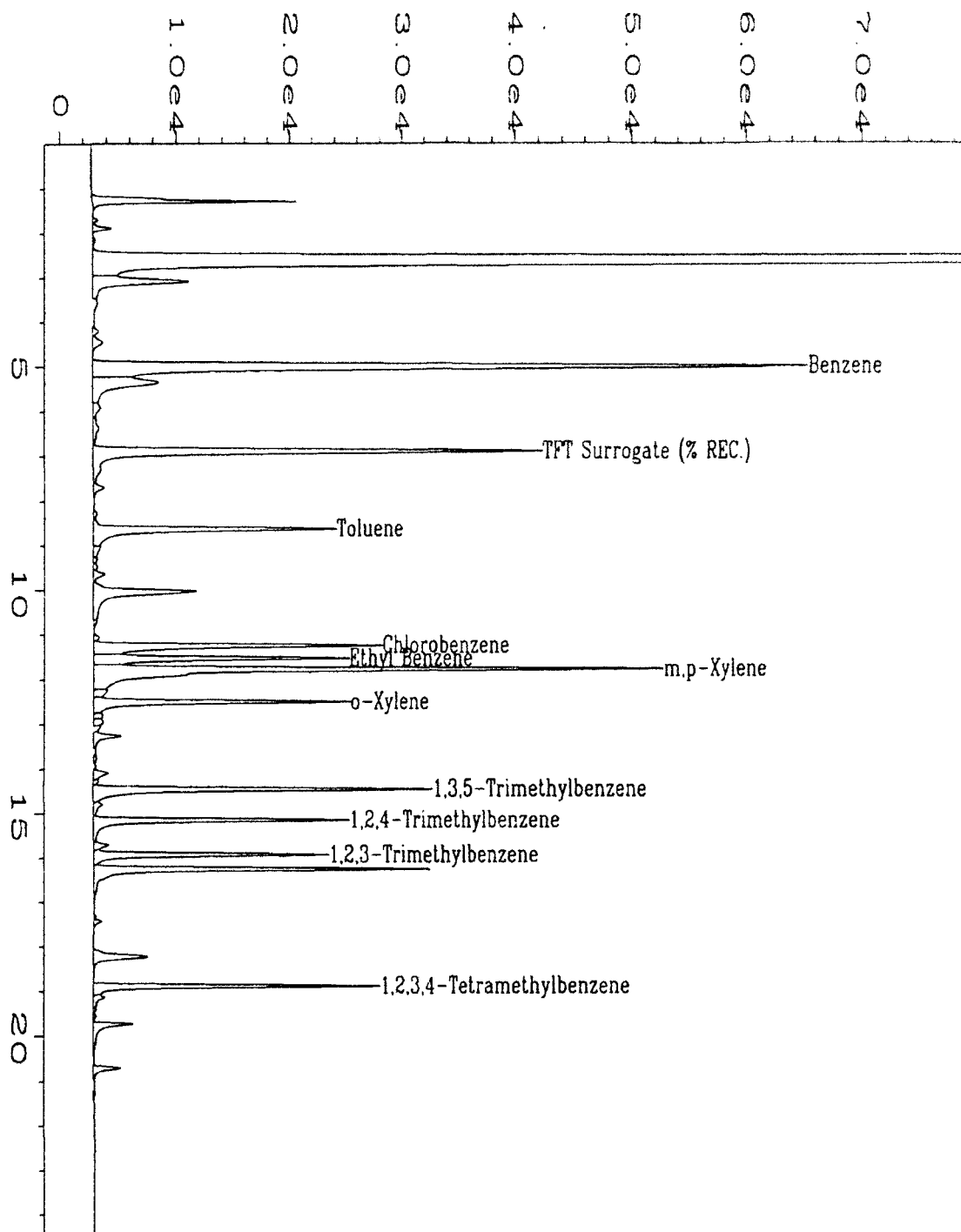
K. Cone
Analyst

MacDill
Approved
MS0983B.XLS



user modified

Data File Name	: C:\HPCHEM\2\DATA\BX20406\015R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04852MS;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20406.MTH
quired on	: 06 Apr 95 07:23 PM	Analysis Method	: BX20406B.MTH
Report Created on:	: 30 Apr 95 08:50 PM	Sample Amount	: 0
Last Recalib on	: 30 APR 95 08:02 PM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\2\DATA\BX20406\016R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04852MSD;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX2040.MT
Acquired on	: 06 Apr 95 08:10 PM	Analysis Method	: BX2040.MT
Report Created on	: 30 Apr 95 08:33 PM	Sample Amount	: 0
Last Recalib on	: 30 APR 95 08:02 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0983 Client#: MW 56-10 Water		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 56MP-6D	Client Project No.	: 722450.21020/PARSONS
Lab Sample No.	: X04853	Lab Project No.	: 95-0983
Date Sampled	: 3/26/95	EPA Method No.	: 5030/8015 Mod.
Date Received	: 3/28/95	Matrix	: Water
Date Prepared	: 4/7/95	Method Blank	: MB040895
Date Analyzed	: 4/7/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.00	2.14	107%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	2.00	1.69	85%	23	50	60-140

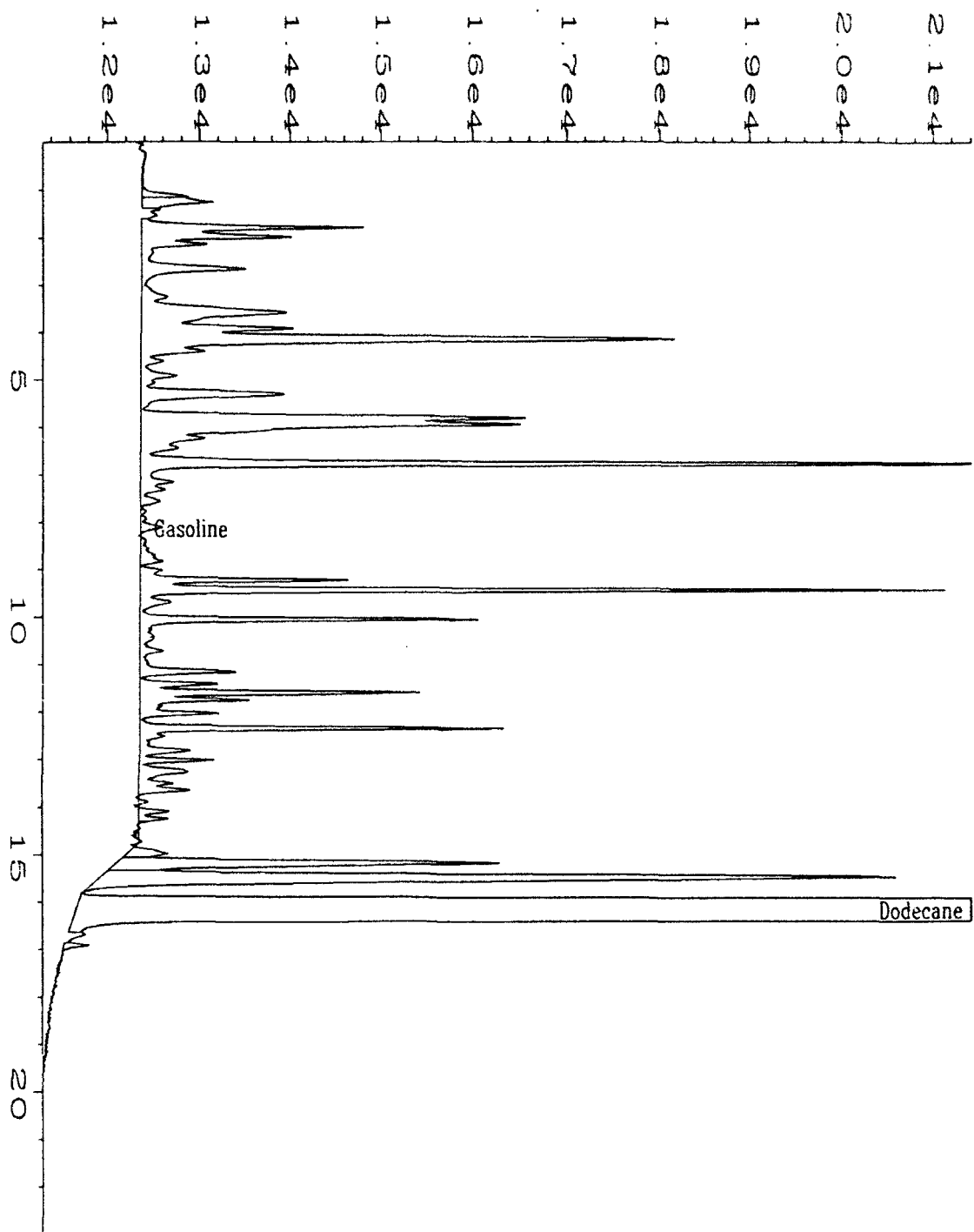
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

Spike Recovery: 0 out of (2) outside limits.

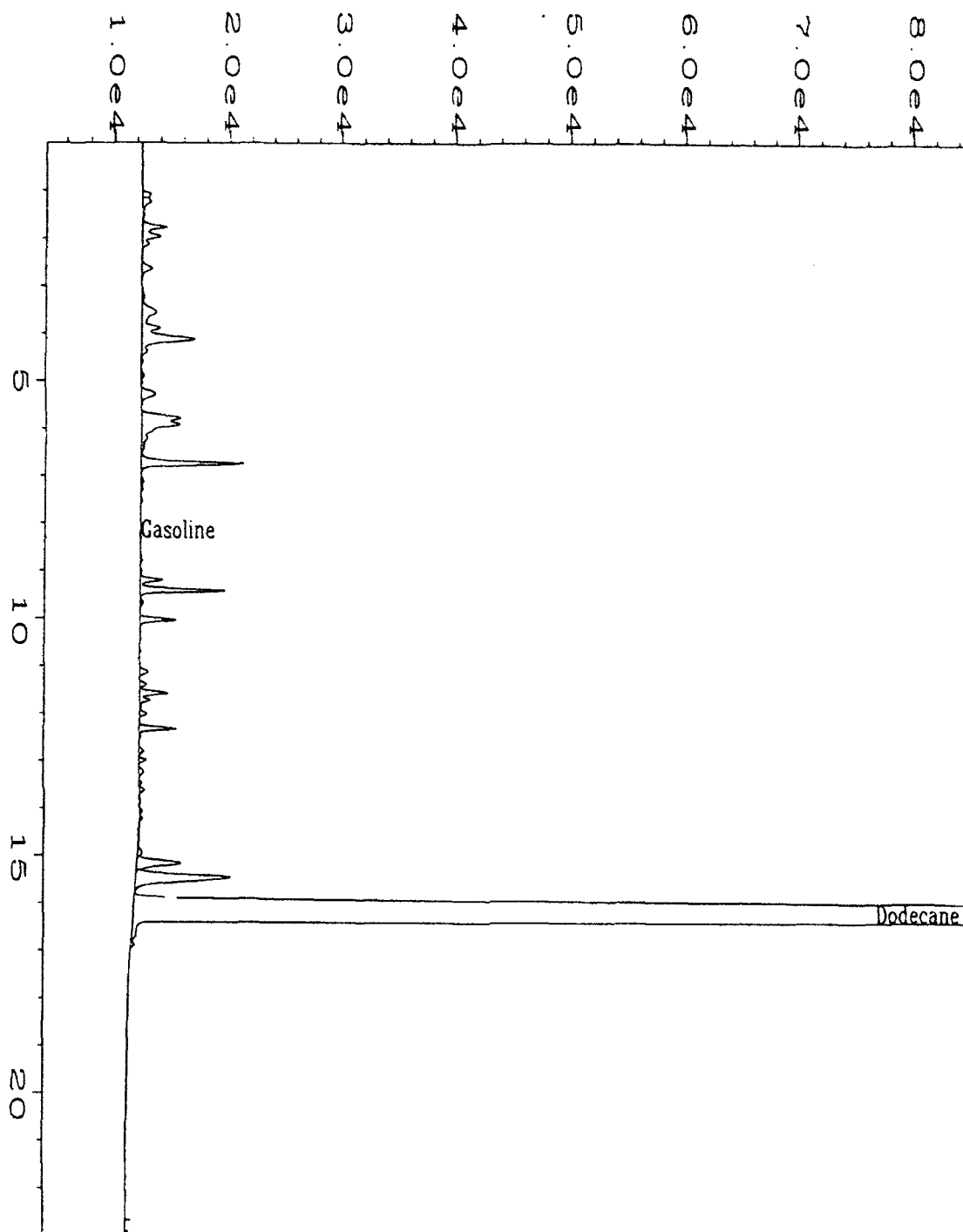
Comments: NA = Not analyzed/not applicable.

bjr



Data File Name	: C:\HPCHEM\1\DATA\tvh0408\012F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04853 MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1B. L.M
Acquired on	: 07 Apr 95 06:35 PM	Analysis Method	: TVH0408.M
Report Created on:	10 Apr 95 09:55 AM	Sample Amount	: 0
Last Recalib on	: 07 APR 95 04:22 PM	ISTD Amount	:
Multiplier	: 1		

56MP-6D MS



Data File Name	: C:\HPCHEM\1\DATA\tvh0408\013F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 13
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04853 MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
quired on	: 07 Apr 95 07:11 PM	Analysis Method	: TVH0408.MTH
Report Created on:	10 Apr 95 09:55 AM	Sample Amount	: 0
Last Recalib on	: 07 APR 95 04:22 PM	ISTD Amount	:
Multiplier	: 1		

56MP-6D MSD

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 30033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW56-9	Client Project No.	: 722450.21020
Lab Sample No.	: X04861	Lab Project No.	: 95-0983
Date Sampled	: 3/27/95	EPA Method No.	: 5030/8015 Mod.
Date Received	: 3/28/95	Matrix	: Water
Date Prepared	: 4/10/95	Method Blank	: MB041095
Date Analyzed	: 4/10/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.00	2.20	110%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	2.00	1.74	87%	23	50	60-140

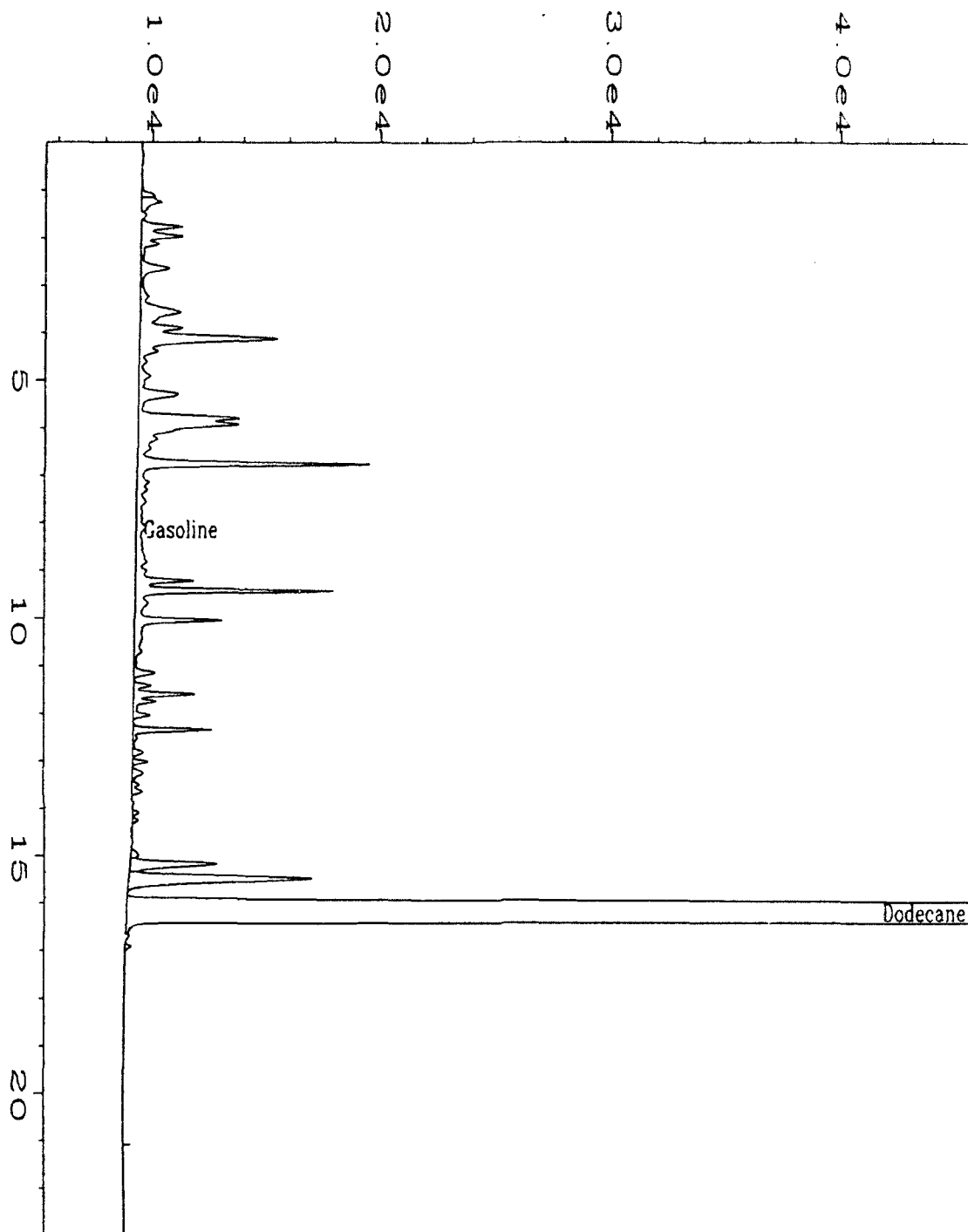
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

Spike Recovery: 0 out of (2) outside limits.

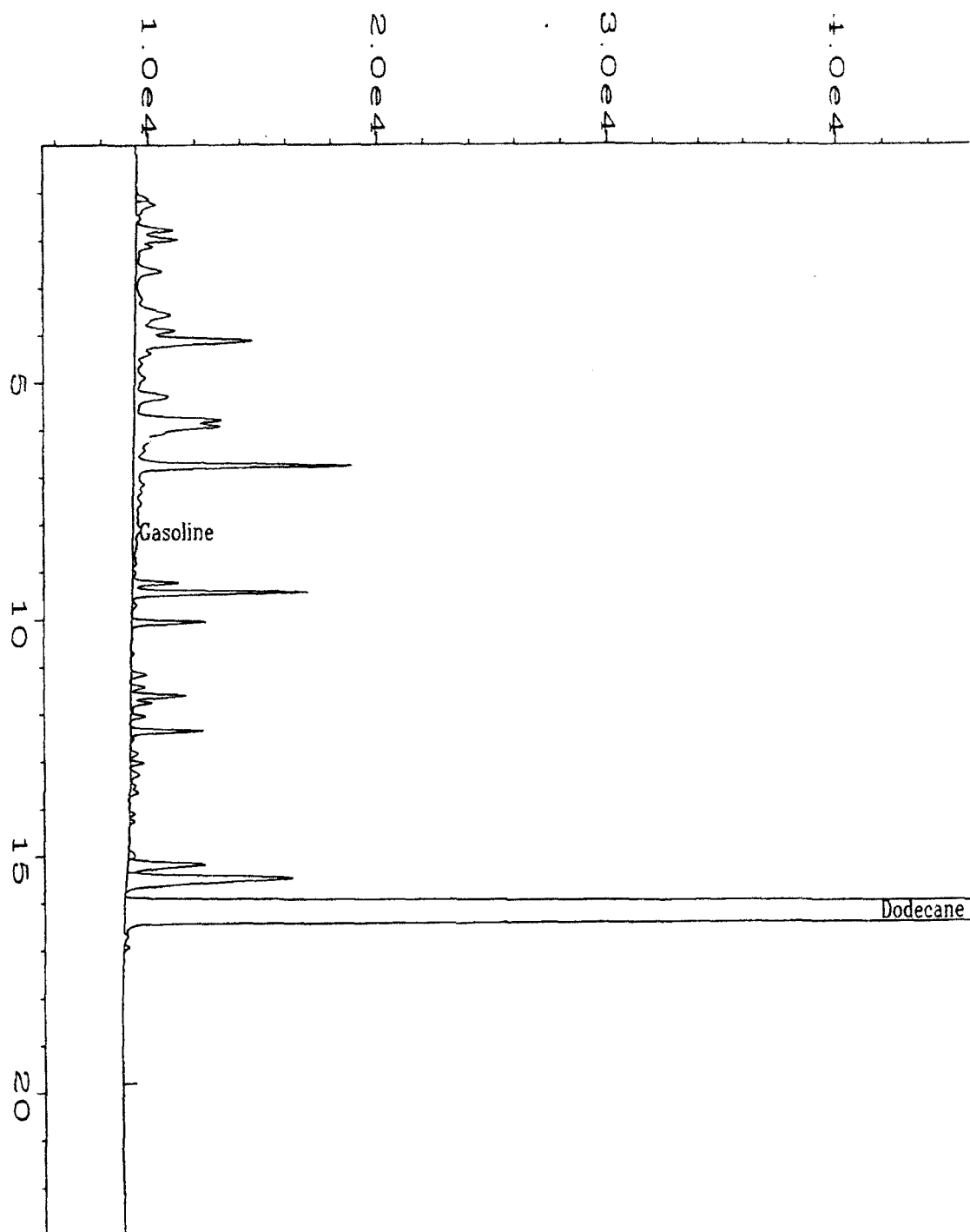
Comments: NA = Not analyzed/not applicable.

fn



Data File Name	: C:\HPCHEM\1\DATA\tvh0410\013F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 13
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04861 MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
quired on	: 10 Apr 95 04:52 PM	Analysis Method	: TVH0410.MTH
Report Created on:	: 10 Apr 95 10:45 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 01:08 PM	ISTD Amount	:
Multiplier	: 1		

MW56-9 MS



Data File Name	: C:\HPCHEM\1\DATA\tvh0410\014F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 14
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04861 MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1B
Acquired on	: 10 Apr 95 05:28 PM	Analysis Method	: TVH04
Report Created on:	10 Apr 95 10:45 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 01:08 PM	ISTD Amount	:
Multiplier	: 1		

MW56-9 MSD

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 56MP-5D	Client Project No.	: 722450.21020
Lab Sample No.	: X04866	Lab Project No.	: 95-0983
Date Sampled	: 3/27/95	EPA Method No.	: 5030/8015 Mod.
Date Received	: 3/28/95	Matrix	: Water
Date Prepared	: 4/10/95	Method Blank	: MB041095
Date Analyzed	: 4/10/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.00	1.93	97%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MS %REC	RPD	QC Limits RPD	QC Limits %REC
Gasoline	2.00	1.99	100%	3	50	60-140

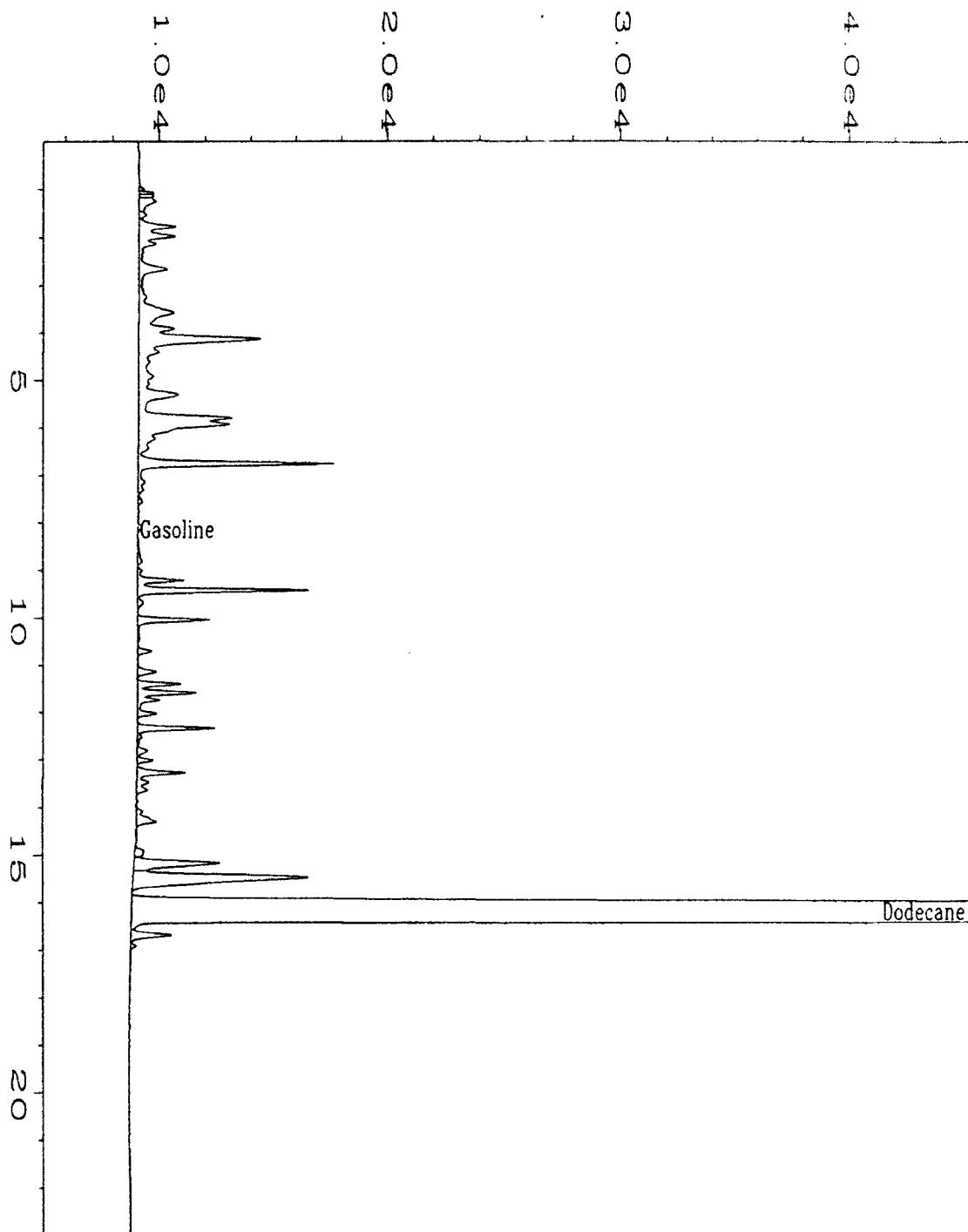
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

Spike Recovery: 0 out of (2) outside limits.

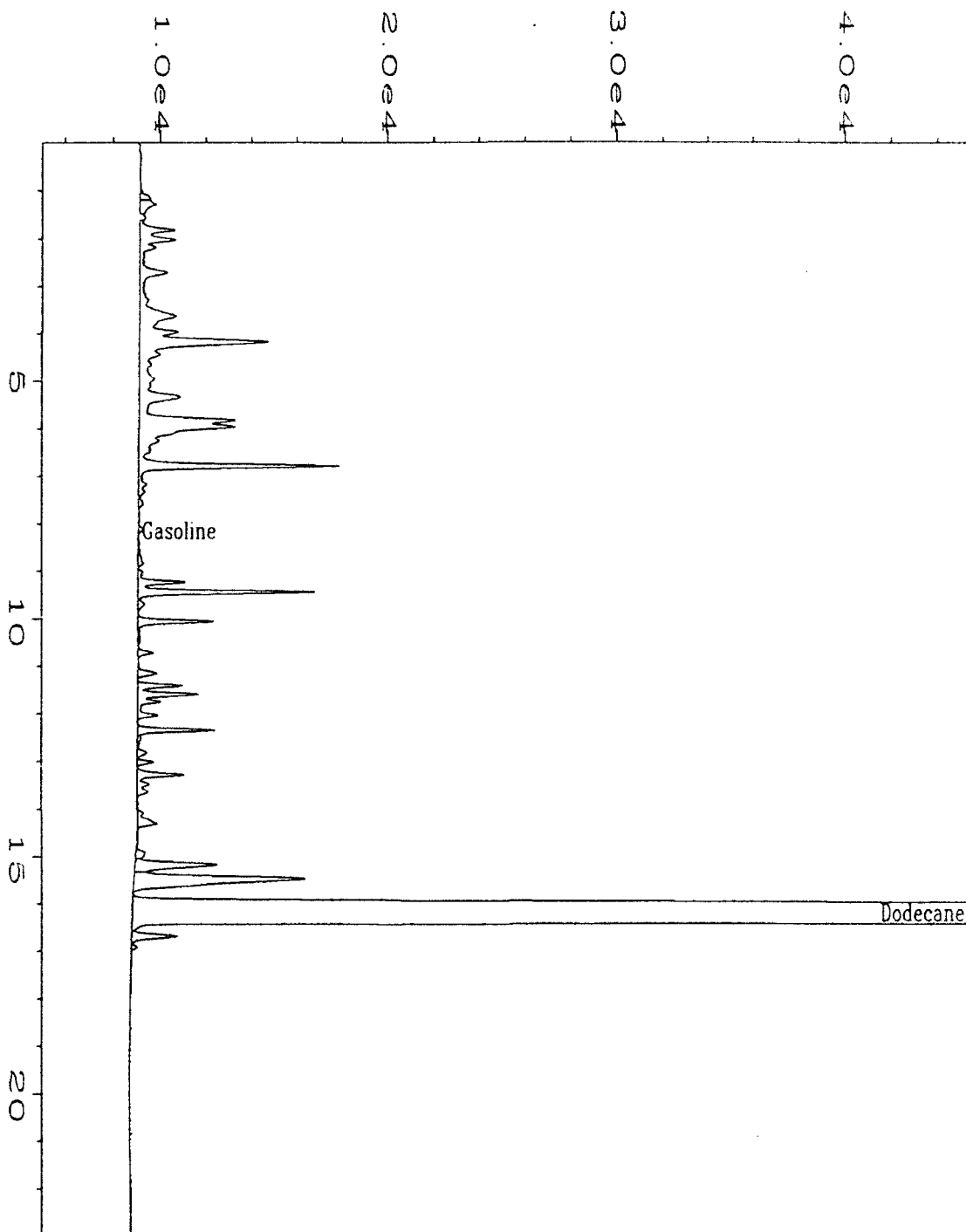
Comments: NA = Not analyzed/not applicable.

112



Data File Name	: C:\HPCHEM\1\DATA\tvh0410\022F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 22
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04866 MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA. 17
Acquired on	: 10 Apr 95 10:16 PM	Analysis Method	: TVH0410.MTF
Report Created on:	10 Apr 95 10:47 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 01:08 PM	ISTD Amount	:
Multiplier	: 1		

56MP-5D MS



Data File Name	: C:\HPCHEM\1\DATA\tvh0410\023F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 23
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04866 MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
quired on	: 10 Apr 95 10:52 PM	Analysis Method	: TVH0410.MTH
Report Created on:	11 Apr 95 10:09 AM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 01:08 PM	ISTD Amount	:
Multiplier	: 1		

56 MP-SD MSD

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040595
Date Prepared : 4/5/95
Date Analyzed : 4/5/95

Client Project No. : 722450.21020/MacDill
Lab Project No. : 95-0983
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040509

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 93% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

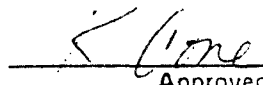
B = Compound also found in the blank.

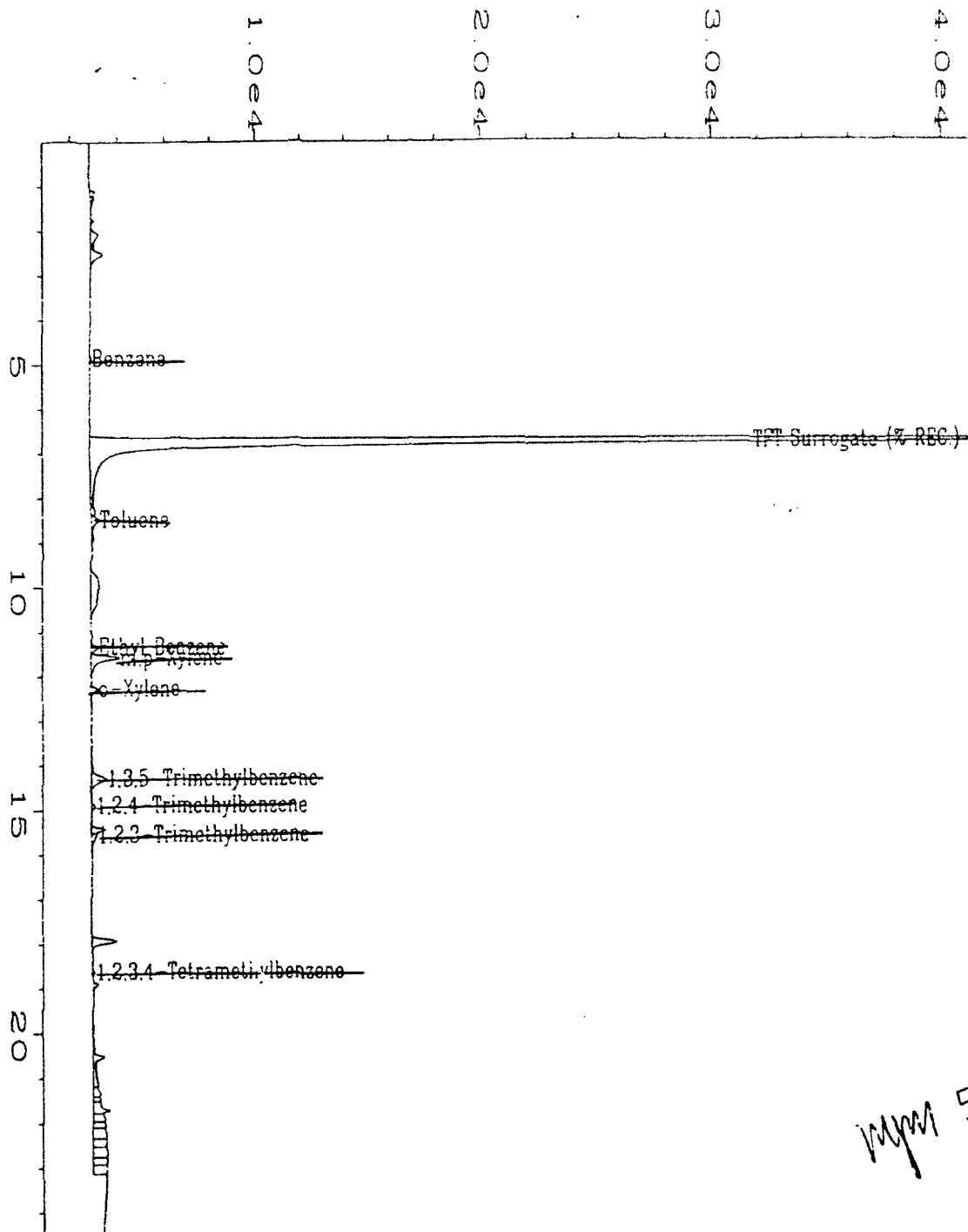
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



mym 5/1/95

Data File Name	: C:\HPCHEM\2\DATA\BX20405\009R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB040595	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20405.MTH
Printed on	: 05 Apr 95 04:21 PM	Analysis Method	: BX20405.MTH
Report Created on:	06 Apr 95 08:31 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040695
Date Prepared : 4/6/95
Date Analyzed : 4/6/95

Client Project No. : 722450.21020/MacDi
Lab Project No. : 95-0983
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040609

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.6	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 105% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

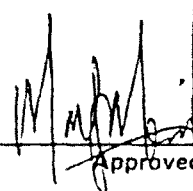
B = Compound also found in the blank.

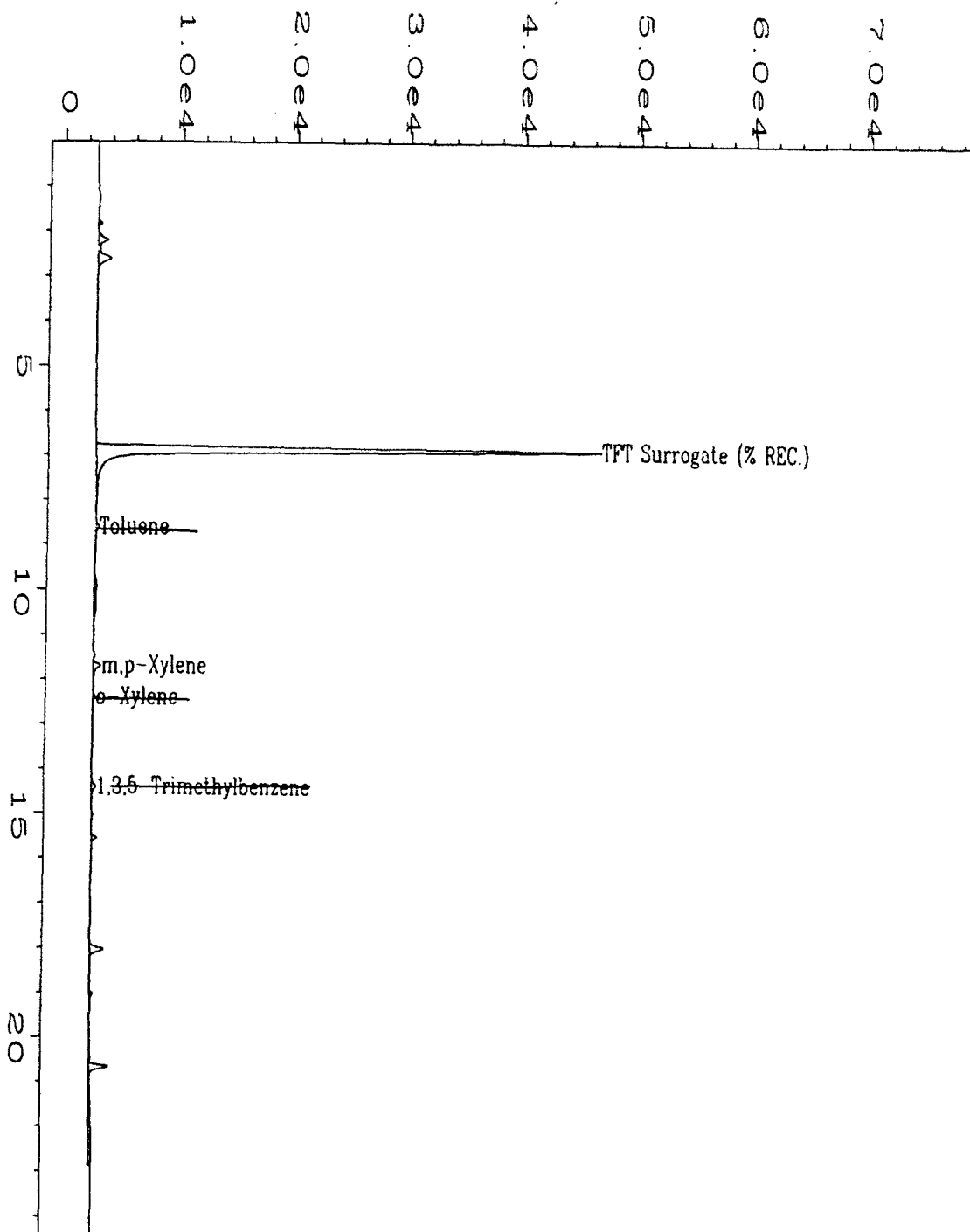
J = Indicates an estimated value when the compound is detected, but is below the Reporting
Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : D:\2\DATA\BX20406\009R0801.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : MB040695
 In Time Bar Code:
 Acquired on : 06 Apr 95 02:47 PM
 Report Created on: 30 Apr 95 08:14 PM
 Last Recalib on : 30 Apr 95 08:02 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 9
 Injection Number : 1
 Sequence Line : 8
 Instrument Method: BX20406.MTH
 Analysis Method : BX20406B.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040795
Date Prepared : 4/7/95
Date Analyzed : 4/7/95

Client Project No. : 722450.21020/MacDill
Lab Project No. : 95-0983
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040709

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 96% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

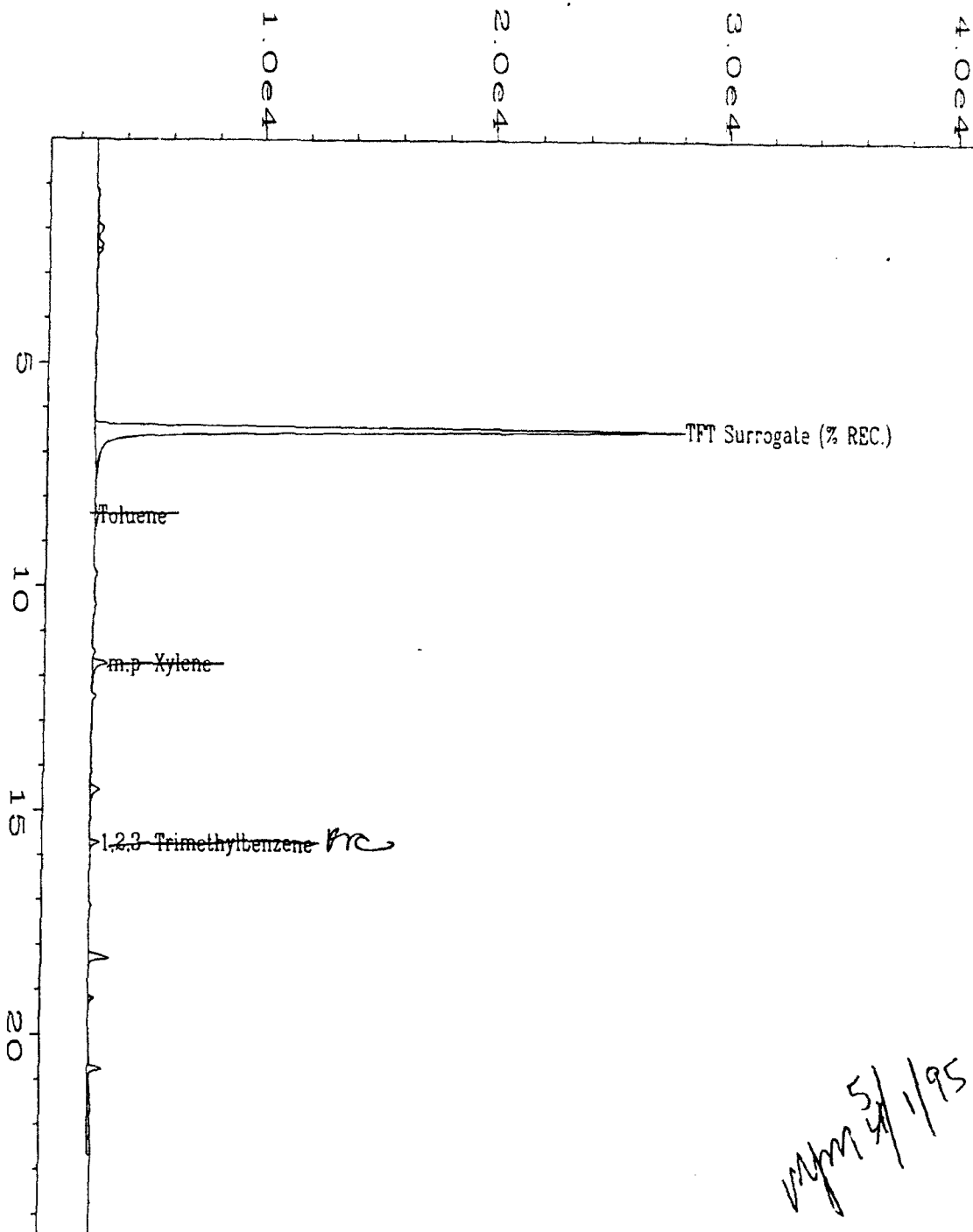
J = Indicates an estimated value when the compound is detected, but is below the Reporting
Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : C:\HPCHEM\2\DATA\BX20407\009R0901.D

Operator : C.J. Cook

Instrument : BTEX2

Sample Name : MB040795

n Time Bar Code:

Acquired on : 07 Apr 95 03:26 PM

Report Created on: 01 May 95 00:45 AM

Last Recalib on : 10 APR 95 07:26 AM

Multiplier : 1

Page Number : 1

Vial Number : 9

Injection Number : 1

Sequence Line : 9

Instrument Method: BX20407.MTH

Analysis Method : BX20407B.MTH

Sample Amount : 0

ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040895
Date Prepared : 4/8/95
Date Analyzed : 4/8/95

Client Project No. : 722450.21020/MacDill
Lab Project No. : 95-0983
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040810

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 104% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

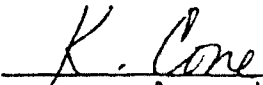
B = Compound also found in the blank.

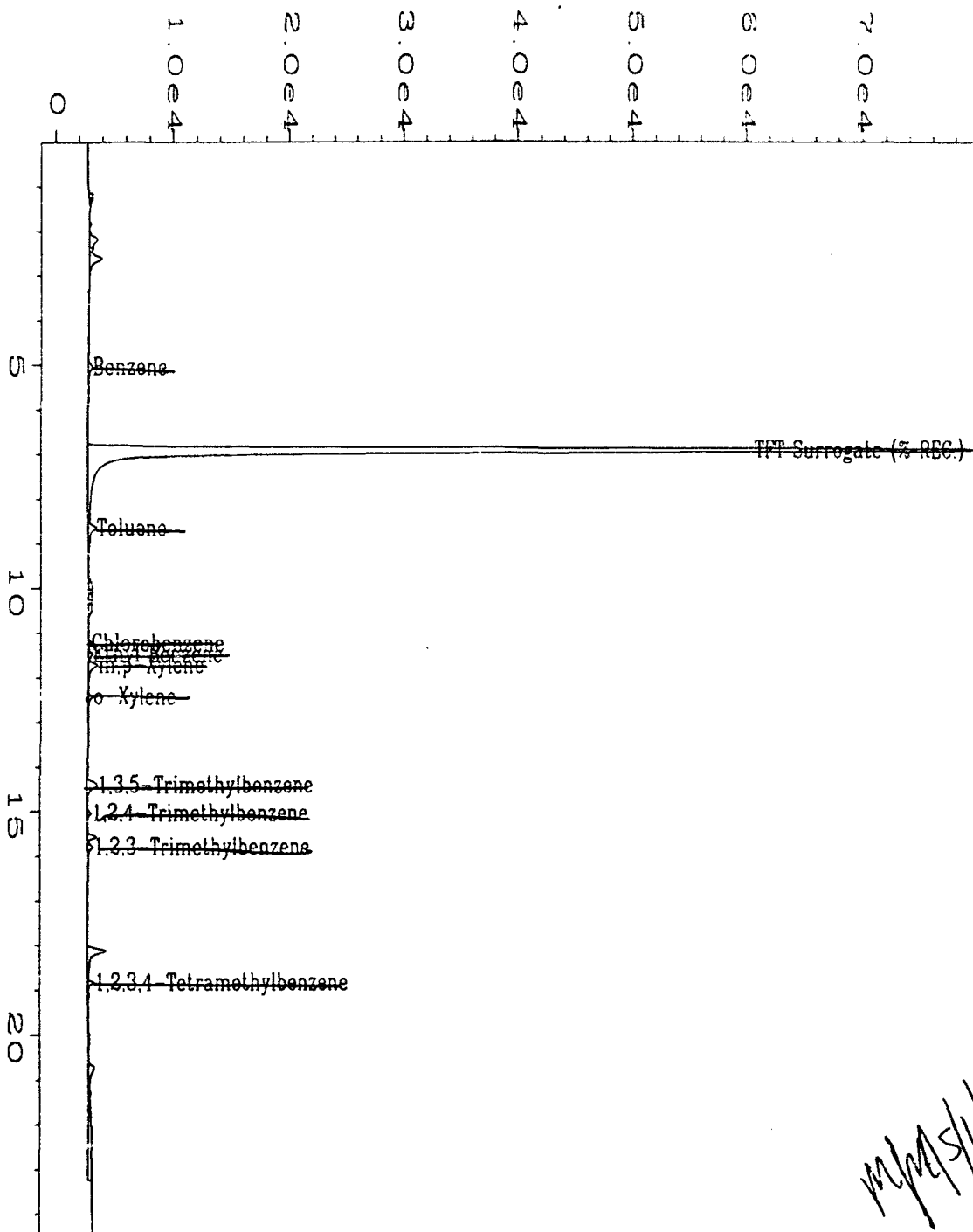
J = Indicates an estimated value when the compound is detected, but is below the Reporting
Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20408\010R0901.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB040895	Sequence Line	: 9
Print Time Bar Code:		Instrument Method	: BX20408.MTH
Acquired on	: 08 Apr 95 04:07 PM	Analysis Method	: BX20408.MTH
Report Created on:	09 Apr 95 02:24 PM	Sample Amount	: 0
Last Recalib on	: 09 Apr 95 02:21 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.21020/MacDil
Lab Sample Number	: X04870	Lab Project No.	: 95-0983
Date Sampled	: NA	Dilution Factor	: 1.00
Date Received	: 3/28/95	Method	: 602
Date Prepared	: 4/7/95	Matrix	: Water
Date Analyzed	: 4/8/95	Lab File No.	: BX2040725
		Method Blank No.	: MB040795

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	79%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

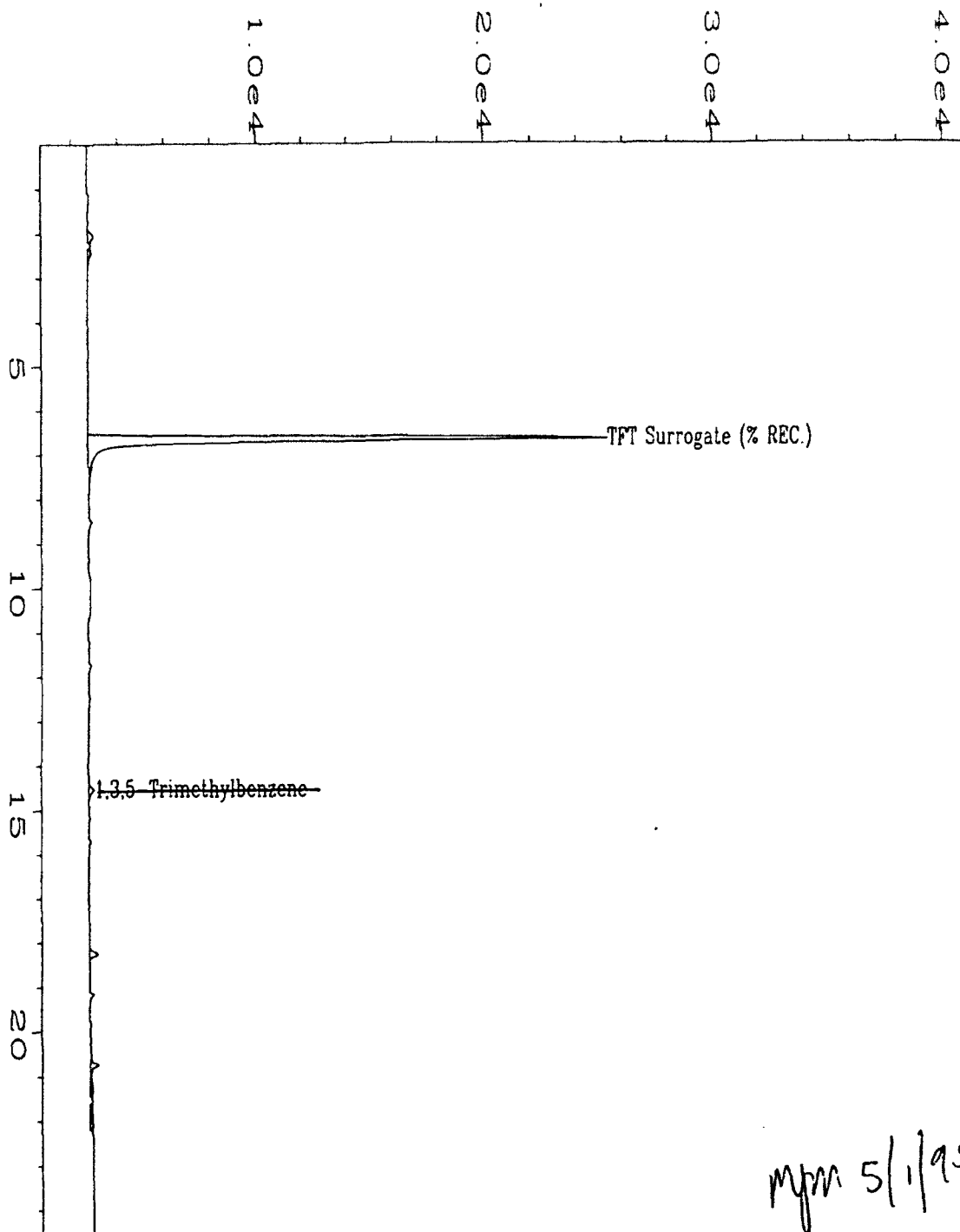
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20407\025R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 25
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04870;1;5	Sequence Line	: 9
Time Bar Code:		Instrument Method	: BX20407.MTH
Acquired on	: 08 Apr 95 02:19 AM	Analysis Method	: BX20407B.MTH
Report Created on	: 01 May 95 00:53 AM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 07:26 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0983 Client#: Trip Blank Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS040595 Dilution Factor : 1.00
Date Extracted/Prepared : 4/5/95 Method : 602
Date Analyzed : 4/5/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2040510

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	15.8	79.0	71.0-119.0*
Toluene	108-88-3	16.2	81.0	73.0-111.0*
Chlorobenzene	108-90-7	16.3	81.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.6	83.0	75.0-114.0*
m,p-Xylene	108-38-3	17.6	88.0	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	16.7	83.5	64.0-114.0*
1,3,5-Trimethylbenzene	108-67-8	16.9	84.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.4	87.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.1	100.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.9	89.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		93%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

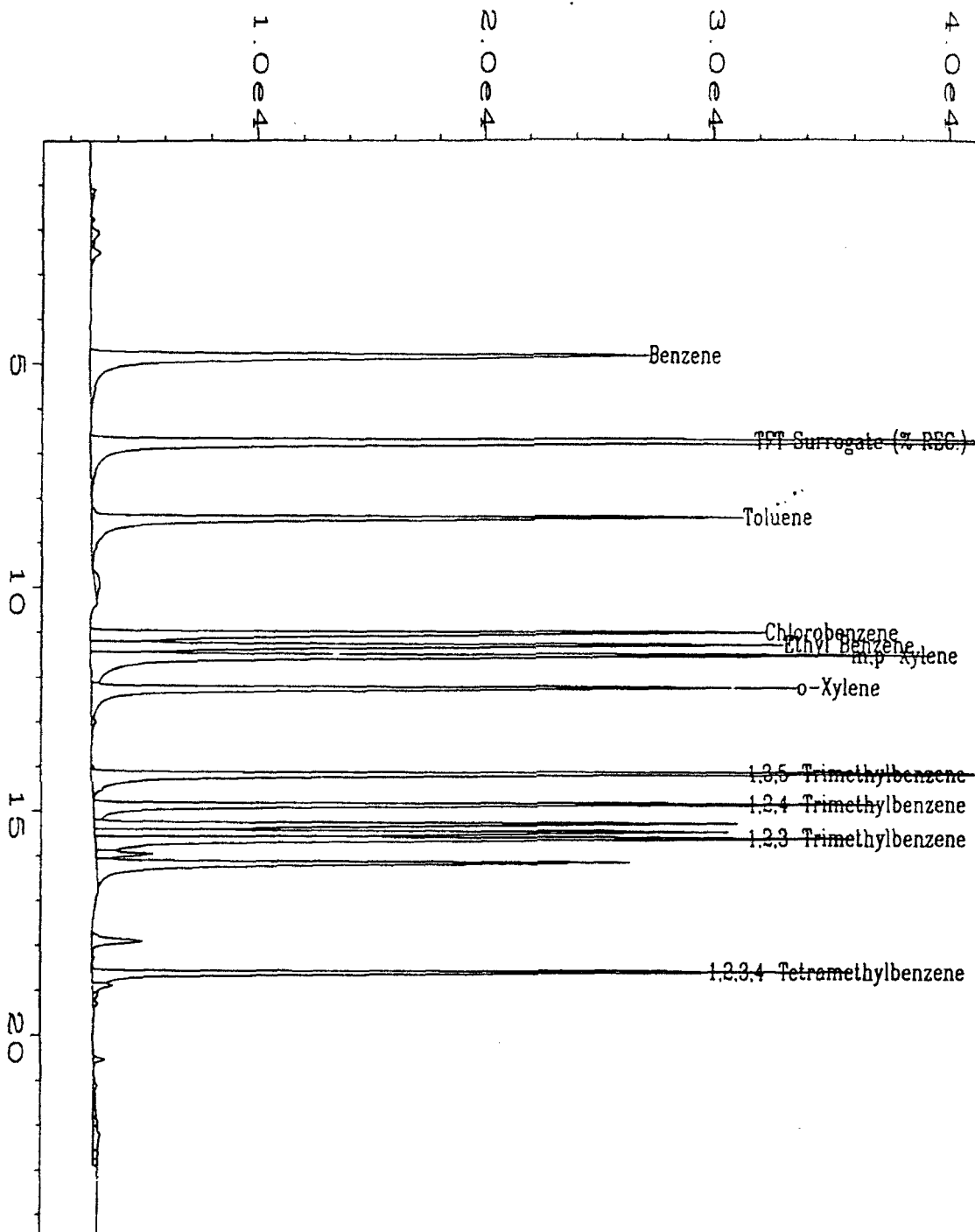
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

M. L. Lind
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20405\010R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS040595	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20405.MTH
Printed on	: 05 Apr 95 05:07 PM	Analysis Method	: BX20405.MTH
Report Created on	: 06 Apr 95 08:32 AM	Sample Amount	: 0
Next Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS040695 Dilution Factor : 1.00
Date Extracted/Prepared : 4/6/95 Method : 602
Date Analyzed : 4/6/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2040610

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.8	84.0	71.0-119.0*
Toluene	108-88-3	16.5	82.5	73.0-111.0*
Chlorobenzene	108-90-7	17.5	87.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.5	82.5	75.0-114.0*
m,p-Xylene	108-38-3 106-42-3	18.0	90.0	75.0-114.0*
o-Xylene	95-47-6	16.6	83.0	64.0-11
1,3,5-Trimethylbenzene	108-67-8	16.0	80.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.5	87.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.8	99.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.9	89.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		106%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

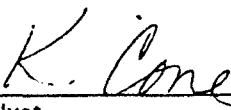
E = Extrapolated value

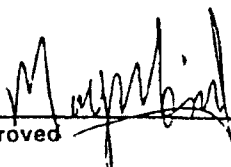
U = Compound analyzed for, but not detected.

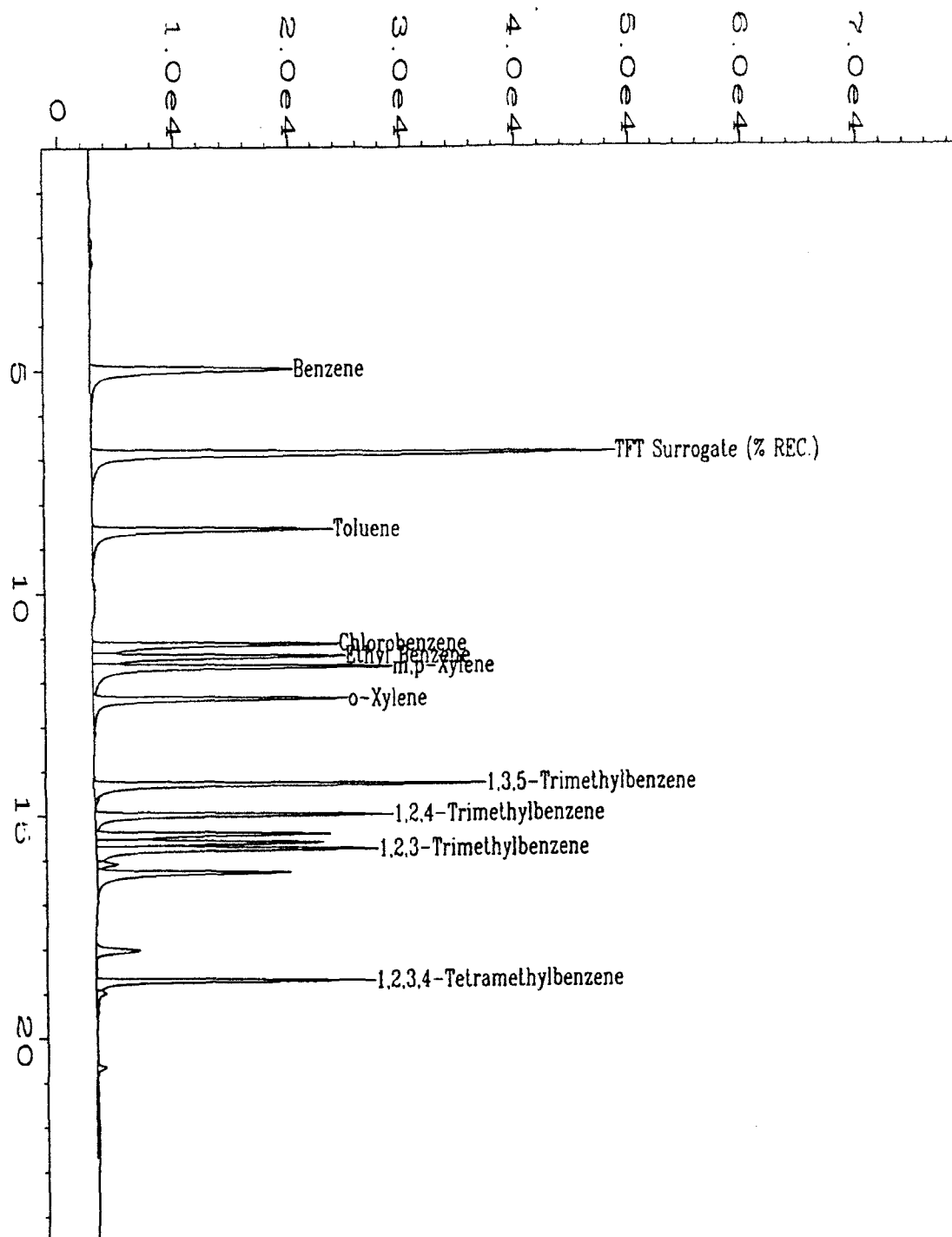
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


Analyst


Approved



Data File Name : D:\2\DATA\BX20406\010R0801.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : LCS040695
 n Time Bar Code:
 Acquired on : 06 Apr 95 03:32 PM
 Report Created on: 30 Apr 95 08:13 PM
 Last Recalib on : 30 Apr 95 08:02 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 10
 Injection Number : 1
 Sequence Line : 8
 Instrument Method: BX20406.MTH
 Analysis Method : BX20.06B.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS040795 Dilution Factor : 1.00
Date Extracted/Prepared : 4/7/95 Method : 602
Date Analyzed : 4/7/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2040710

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.7	83.5	71.0-119.0*
Toluene	108-88-3	16.4	82.0	73.0-111.0*
Chlorobenzene	108-90-7	18.1	90.5	64.0-119.0*
Ethyl Benzene	100-41-4	17.1	85.5	75.0-114.0*
m,p-Xylene	108-38-3	18.3	91.5	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	17.1	85.5	64.0-111.0*
1,3,5-Trimethylbenzene	108-67-8	17.8	89.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.9	89.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.8	104.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.6	93.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		97%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:


E = Extrapolated value

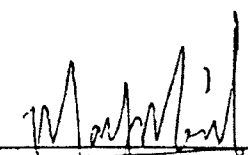
U = Compound analyzed for, but not detected.

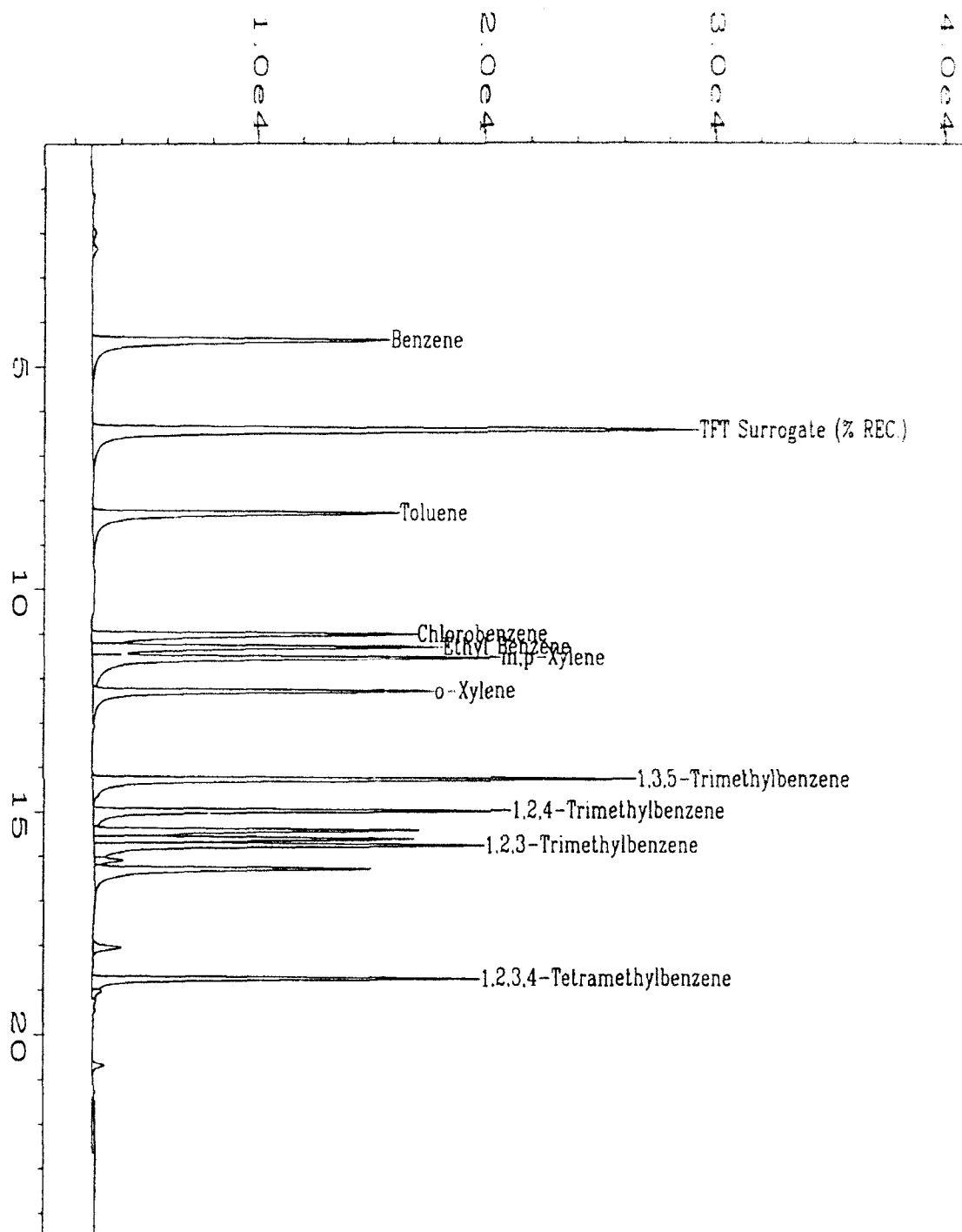
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20407\010R0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS040795	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20407.MTH
Acquired on	: 07 Apr 95 04:06 PM	Analysis Method	: BX20407B.MTH
Report Created on:	01 May 95 00:39 AM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 07:26 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS040895 Dilution Factor : 1.00
Date Extracted/Prepared : 4/8/95 Method : 602
Date Analyzed : 4/8/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2040811

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	15.9	79.5	71.0-119.0*
Toluene	108-88-3	16.4	82.0	73.0-111.0*
Chlorobenzene	108-90-7	15.9	79.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.6	83.0	75.0-114.0*
m,p-Xylene	108-38-3 106-42-3	16.9	84.5	75.0-114.0*
o-Xylene	95-47-6	15.2	76.0	64.0-111.0*
1,3,5-Trimethylbenzene	108-67-8	16.2	81.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.9	89.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	21.7	108.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.6	88.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		98%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

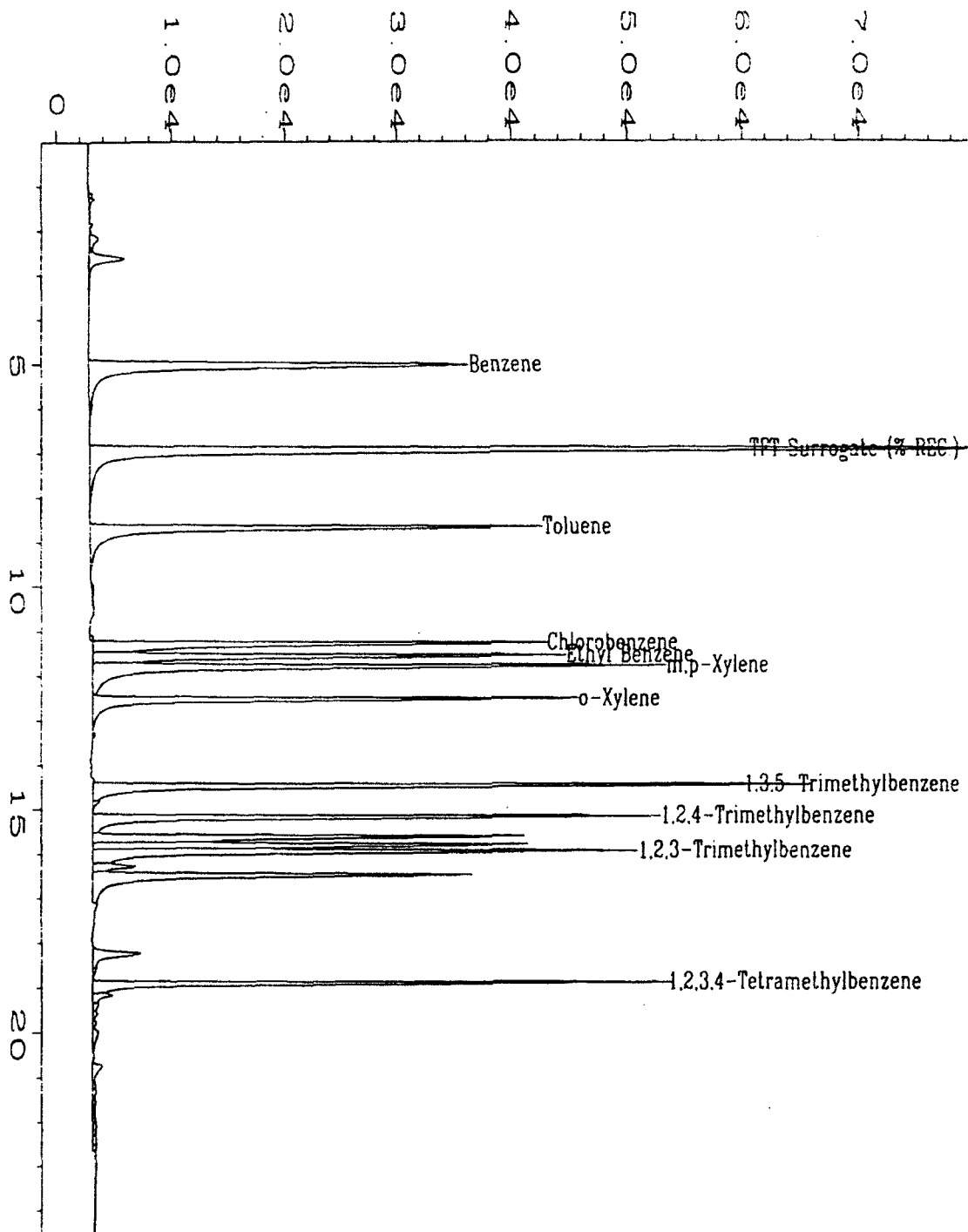
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

W. [Signature]
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20408\011R0901.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS040895	Sequence Line	: 9
Time Bar Code:		Instrument Method:	BX20408.MTH
Acquired on	: 08 Apr 95 04:54 PM	Analysis Method	: BX20408.MTH
Report Created on:	09 Apr 95 02:25 PM	Sample Amount	: 0
Last Recalib on	: 09 Apr 95 02:21 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 3/24,26/95	Client Project Number	: 722450.21020
Date Received	: 3/28/95	Lab Project Number	: 95-0983
Date Prepared	: 4/3,7/95	Matrix	: Water
Date Analyzed	: 4/3,4,7,8/95	Method Number	: 5030/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH mg/L	RL mg/L
MB040395	METHOD BLANK	100%	U	0.1
MB040895	METHOD BLANK	100%	U	0.1
MB041095	METHOD BLANK	100%	U	0.1
X04848	24 PZ-1S	98%	0.5	0.1
X04849	24 PZ-1D	99%	U	0.1
X04850	24 MP-6S	100%	U	0.1
X04851	MD32-3	96%	U	0.1
X04852	MW56-10	101%	1.0	0.1
X04853	56MP-6D	98%	U	0.1
X04854	56MP-6S	94%	U	0.1
X04854 DUP	56MP-6S	92%	U	0.1
X04855	MW56-1	90%	U	0.1
X04856	MW56-21	92%	U	0.1
X04857	56MP-8S	97%	U	0.1
X04858	56MP-10S	96%	U	0.1
X04859	MW56-2	92%	U	0.1
X04859 DUP	MW56-2	91%	U	0.1
X04860	MW56-8	91%	0.2	0.1

QUALIFIERS

U = TVH analyzed for but not detected.

B = TVH found in blank.

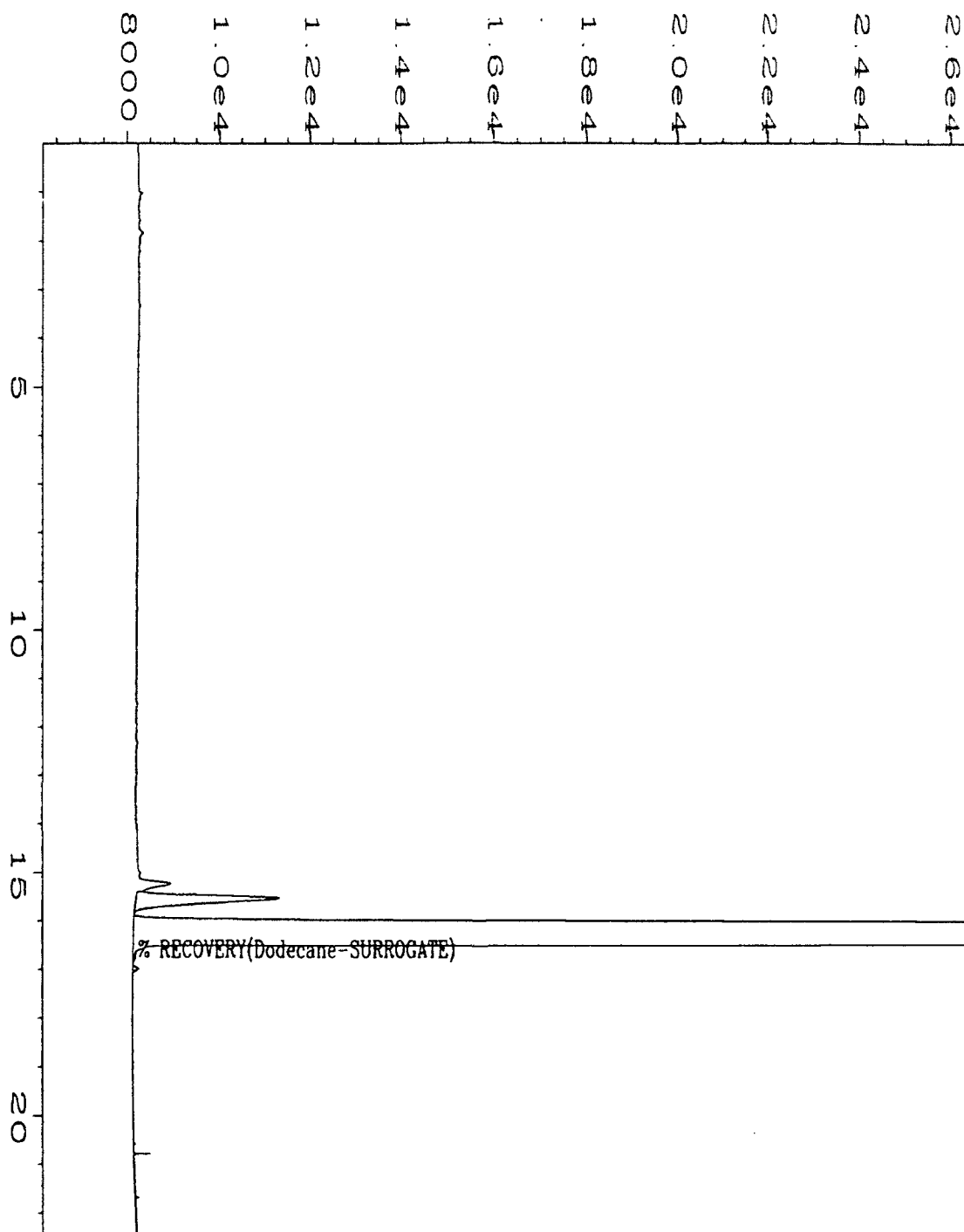
E = Extrapolated value.

RL = Reporting Limit.

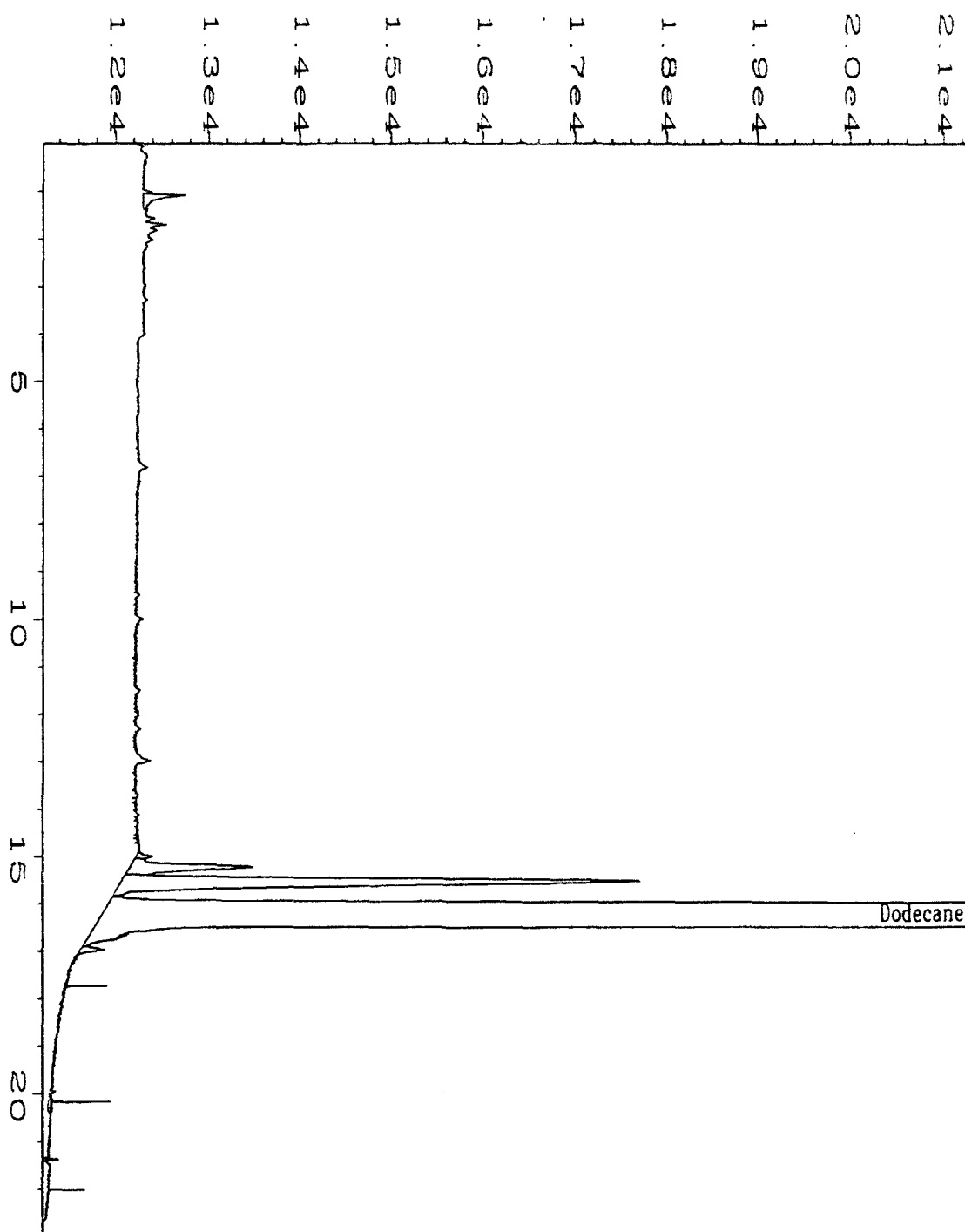

Analyst


Approved

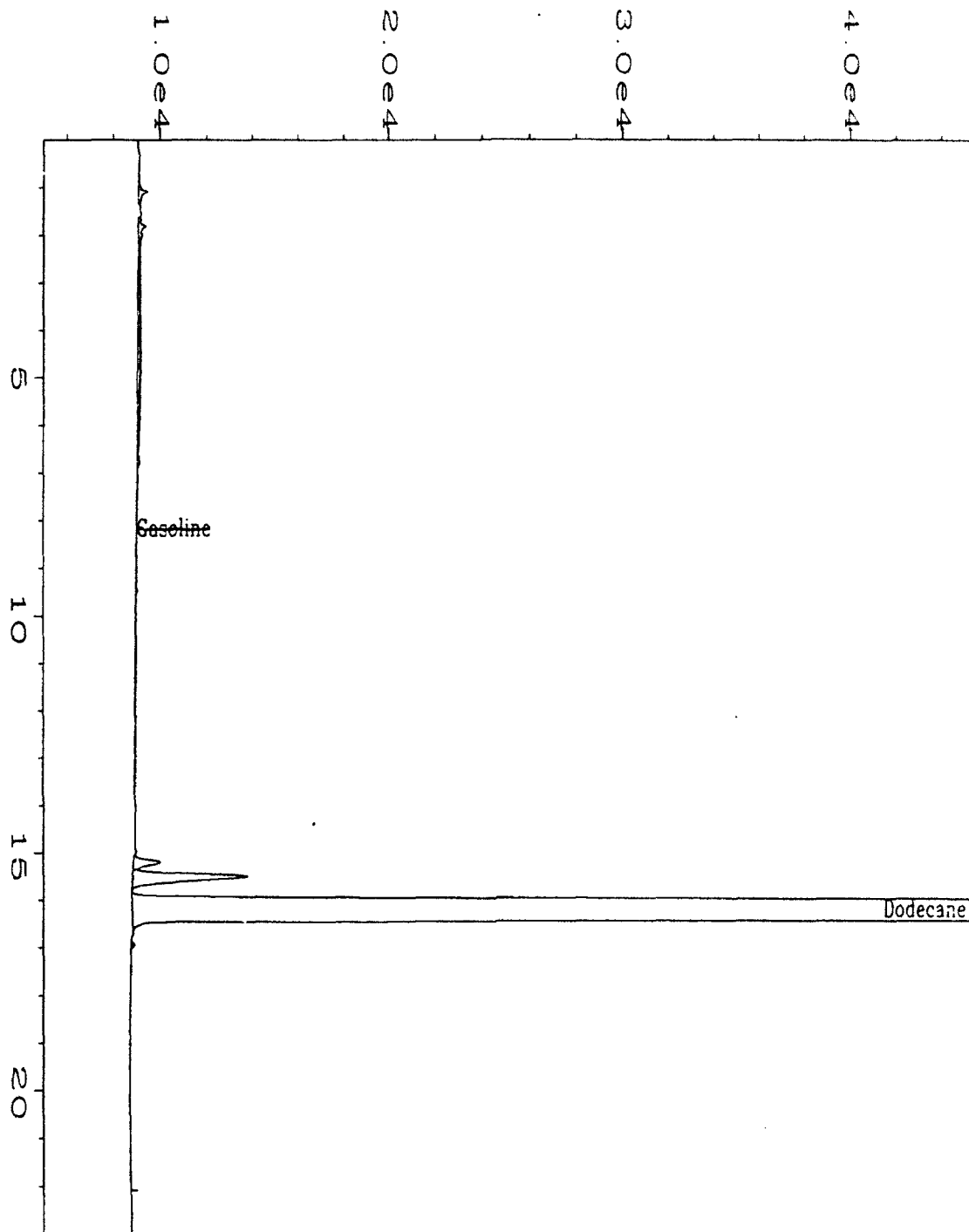
TVH0983.XLS



Data File Name	: C:\HPCHEM\1\DATA\TVH0402\050F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 50
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB040395	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0402.MTH
quired on	: 03 Apr 95 08:52 PM	Analysis Method	: TVH0402.MTH
Report Created on:	11 Apr 95 11:16 AM	Sample Amount	: 0
Last Recalib on	: 02 APR 95 01:38 PM	ISTD Amount	:
Multiplier	: 1		

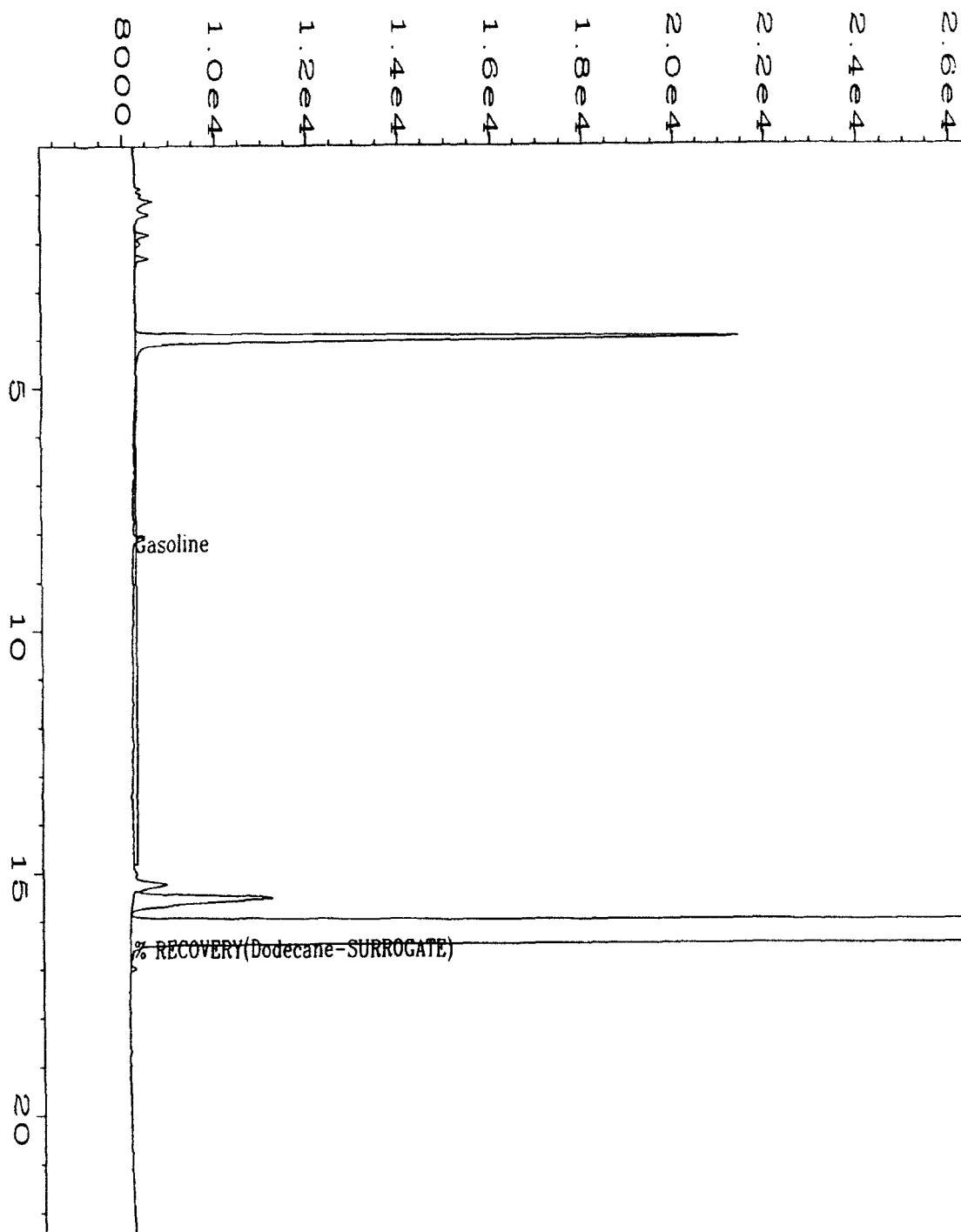


Data File Name	: C:\HPCHEM\1\DATA\tvh0408\009F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB040895	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1B/ M
Acquired on	: 07 Apr 95 04:47 PM	Analysis Method	: TVH0408.MT
Report Created on:	10 Apr 95 09:55 AM	Sample Amount	: 0
Last Recalib on	: 07 APR 95 04:22 PM	ISTD Amount	:
Multiplier	: 1		



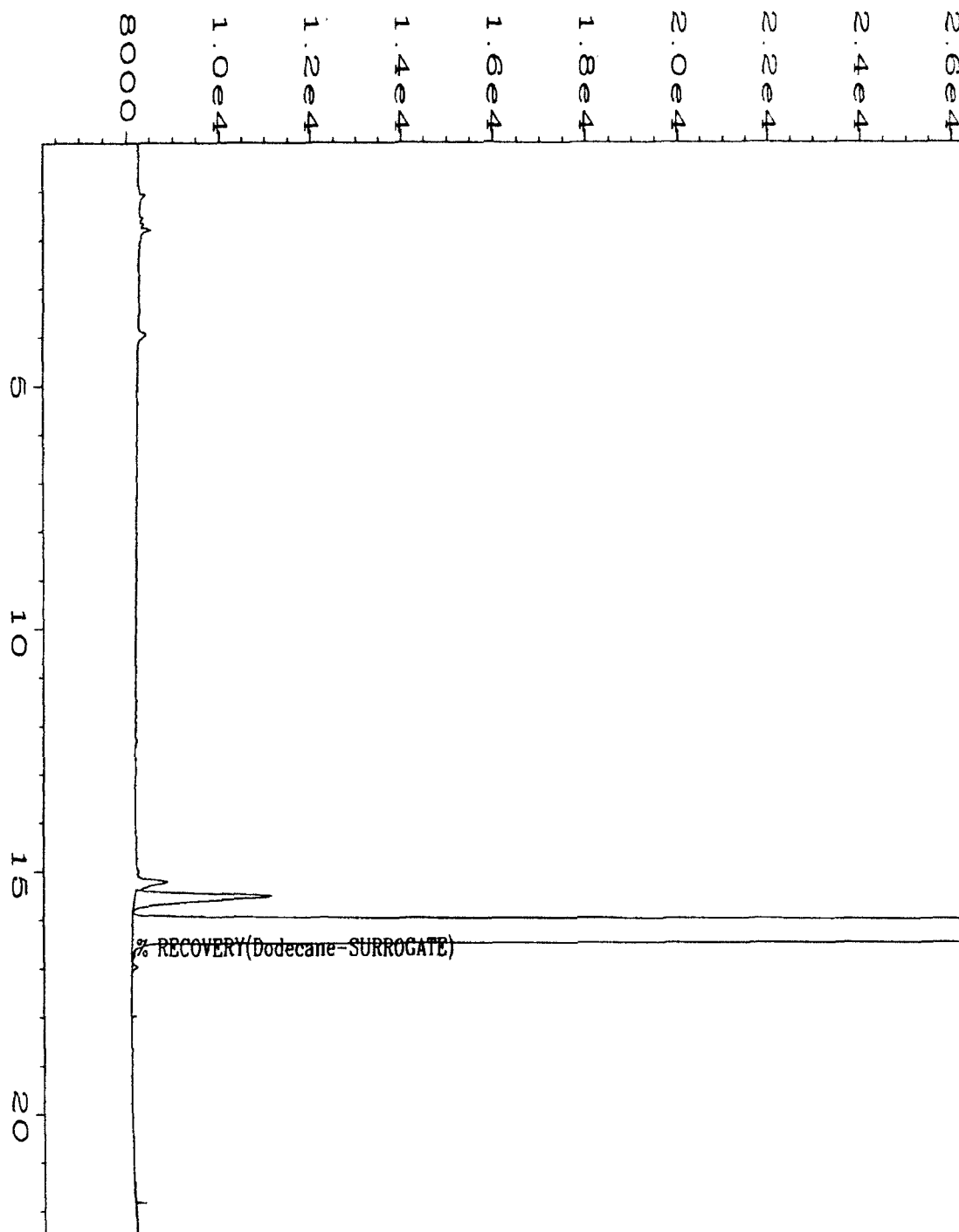
Data File Name	: C:\HPCHEM\1\DATA\tvh0410\008F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB041095	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH19ASE.MTH
quired on	: 10 Apr 95 01:52 PM	Analysis Method	: TVH0410.MTH
Report Created on:	10 Apr 95 03:05 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 01:08 PM	ISTD Amount	:
Multiplier	: 1		

dm 4/20/95



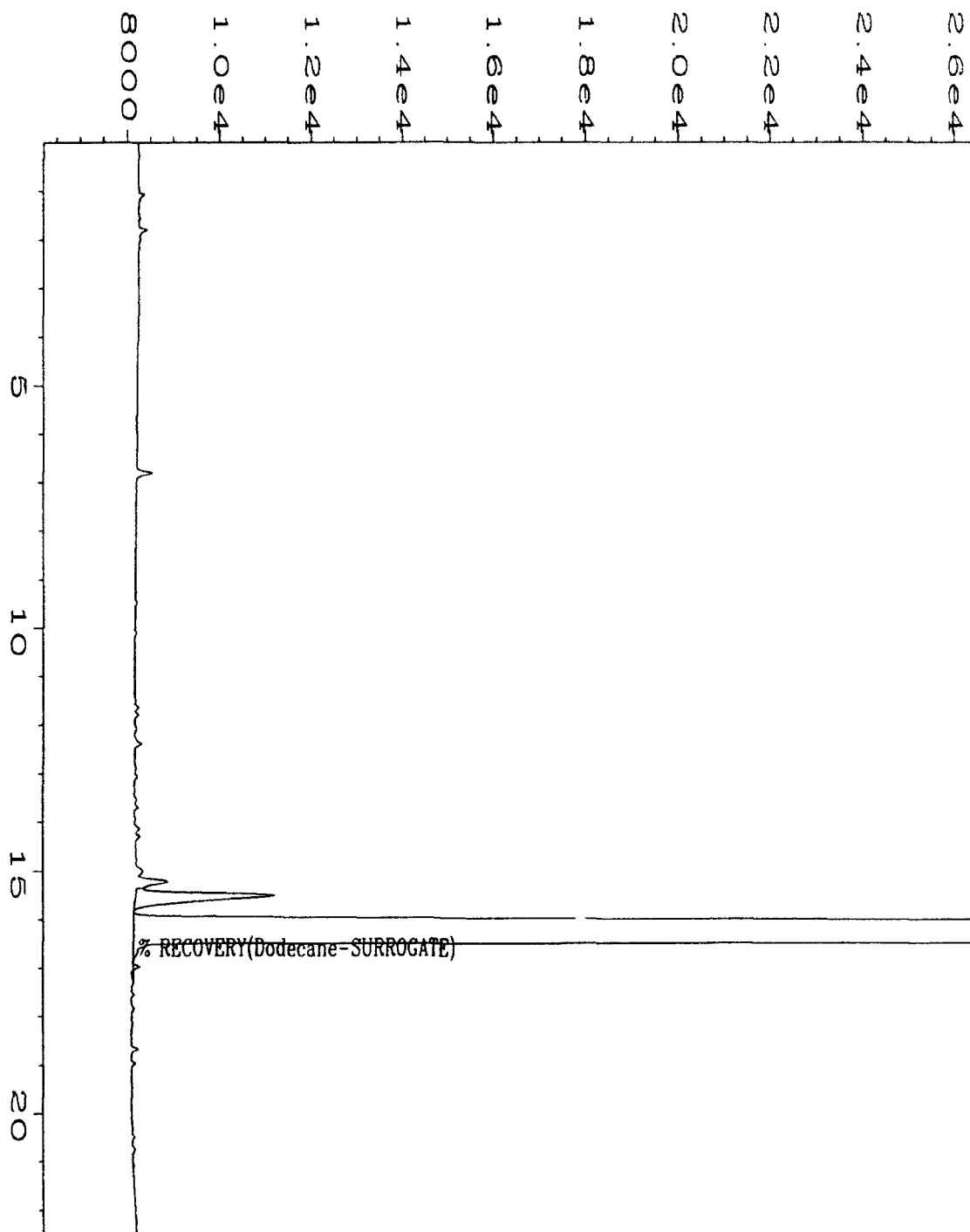
Data File Name	: C:\HPCHEM\1\DATA\TVH0402\061F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 61
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04848;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH040 .T
Acquired on	: 04 Apr 95 03:05 AM	Analysis Method	: TVH0402.MT
Report Created on:	11 Apr 95 11:14 AM	Sample Amount	: 0
Last Recalib on	: 02 APR 95 01:38 PM	ISTD Amount	:
Multiplier	: 1		

Client # 24 PZ-15



Data File Name	: C:\HPCHEM\1\DATA\TVH0402\062F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 62
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04849;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0402.MTH
Acquired on	: 04 Apr 95 03:39 AM	Analysis Method	: TVH0402.MTH
Report Created on:	11 Apr 95 11:14 AM	Sample Amount	: 0
Last Recalib on	: 02 APR 95 01:38 PM	ISTD Amount	:
Multiplier	: 1		

24PZ-1D



Data File Name	: C:\HPCHEM\1\DATA\TVH0402\063F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 63
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04850;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH04
Acquired on	: 04 Apr 95 04:13 AM	Analysis Method	: TVH0402.M1
Report Created on:	11 Apr 95 11:15 AM	Sample Amount	: 0
Last Recalib on	: 02 APR 95 01:38 PM	ISTD Amount	:
Multiplier	: 1		

24MP-65

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS040295 Matrix : WATER
Date Prepared : 4/1/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/2/95
Sequence Number : TVH8

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	2.00	2.18	109%	70%-130%

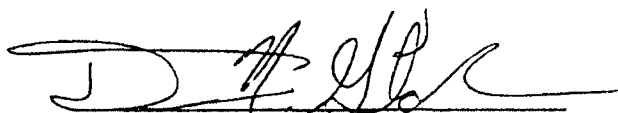
QUALIFIERS


U = TVH analyzed for but not detected.

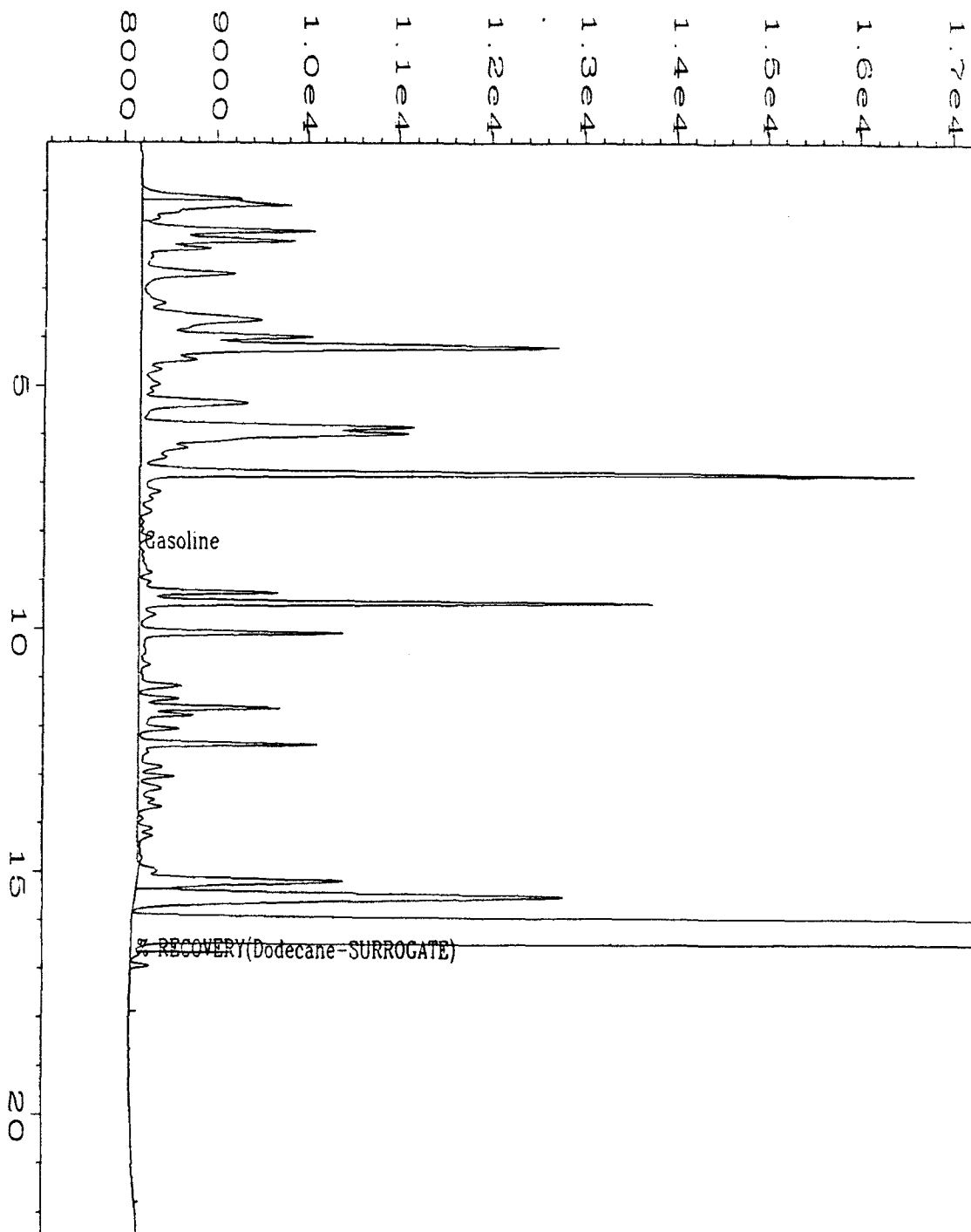
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0402\008F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS040295	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH040 IT
Acquired on	: 02 Apr 95 02:20 PM	Analysis Method	: TVH0402.MT
Report Created on:	11 Apr 95 11:18 AM	Sample Amount	: 0
Last Recalib on	: 02 APR 95 01:38 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS040895 Matrix : WATER
Date Prepared : 4/7/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/7/95
Sequence Number : TVH8

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	5.38	108%	70%-130%

QUALIFIERS

U = TVH analyzed for but not detected.

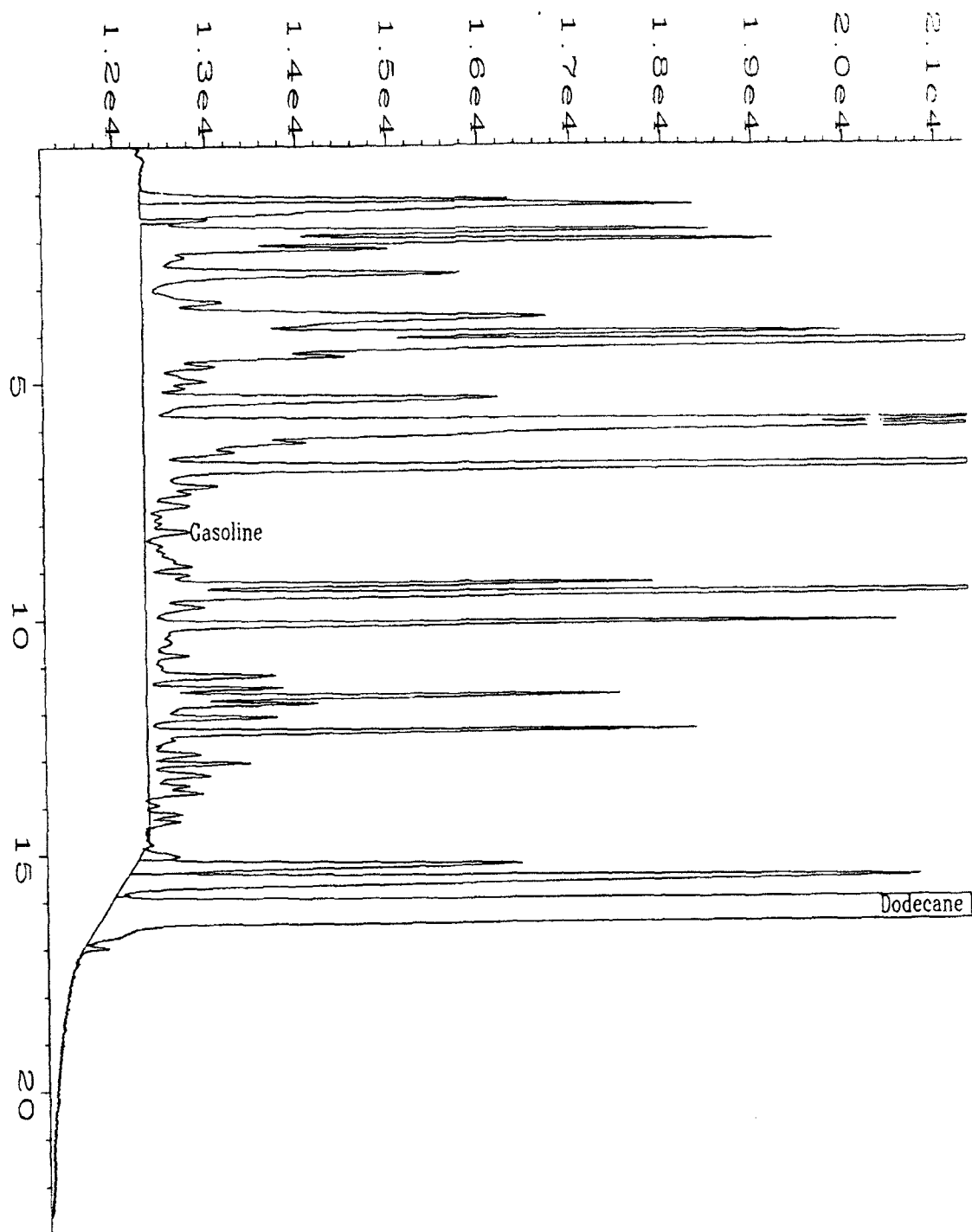
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.

K. Cone
Analyst

AmcClall
Approved



Data File Name	: C:\HPCHEM\1\DATA\tvh0408\008F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS040895	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1B .M
Acquired on	: 07 Apr 95 04:11 PM	Analysis Method	: TVH0408.MT
Report Created on:	10 Apr 95 09:54 AM	Sample Amount	: 0
Last Recalib on	: 07 APR 95 04:22 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS041095 Matrix : WATER
Date Prepared : 4/10/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/10/95
Sequence Number : TVH7

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	4.97	99%	70%-130%

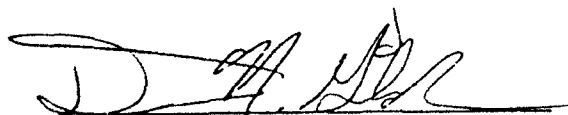
QUALIFIERS

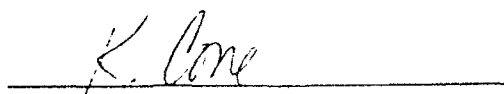
U = TVH analyzed for but not detected.

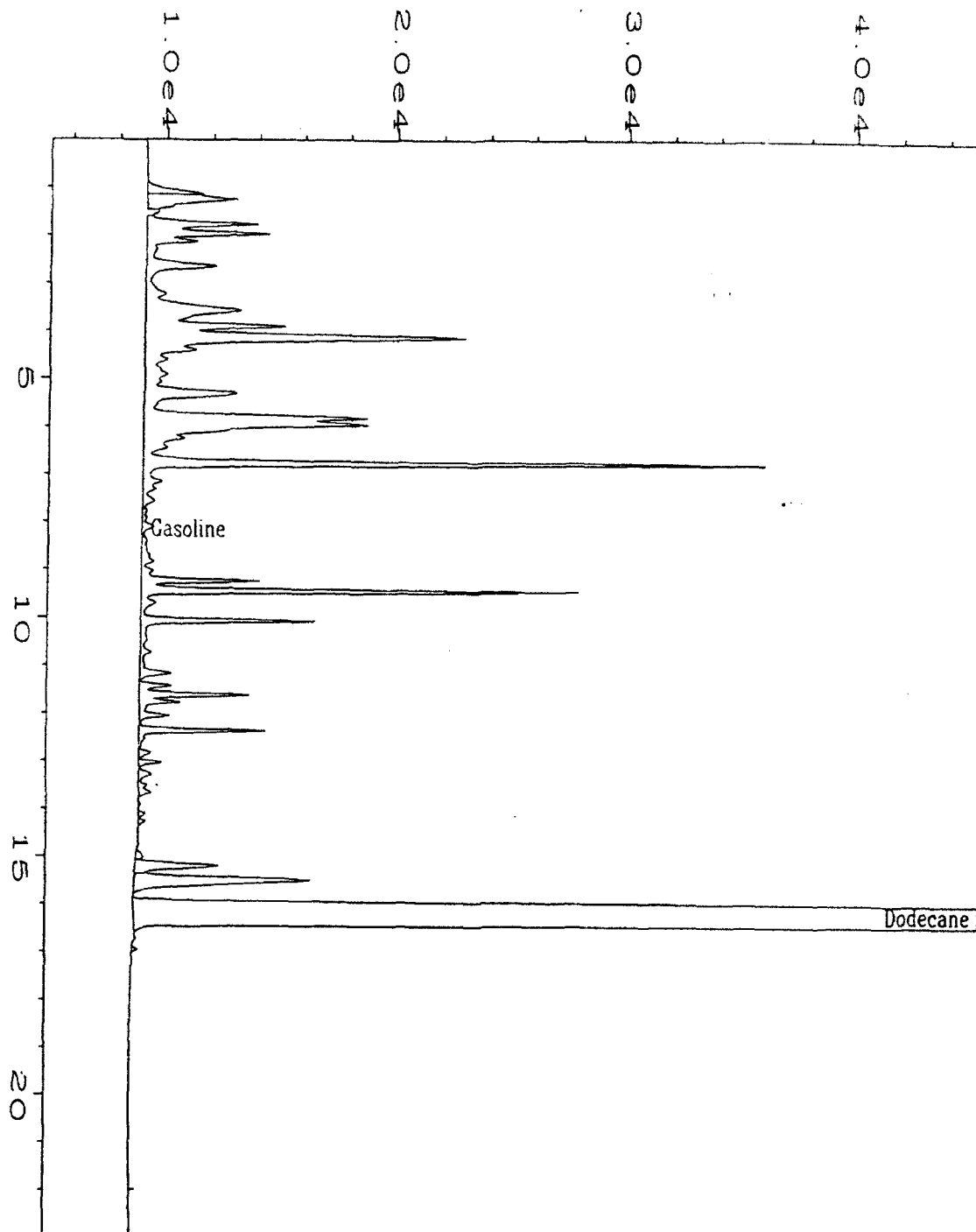
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.


Analyst


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ata File Name	: C:\HPCHEM\1\DATA\tvh0410\007F0101.D	Page Number	: 1
perator	: Dawn N. Guildner	Vial Number	: 7
nstrument	: TVH	Injection Number	: 1
ample Name	: LCS041095	Sequence Line	: 1
un Time Bar Code:		Instrument Method:	TVH1BASE.
cquired on	: 10 Apr 95 01:17 PM	Analysis Method	: TVH0410.MTH
eport Created on:	10 Apr 95 03:04 PM	Sample Amount	: 0
ast Recalib on	: 10 APR 95 01:08 PM	ISTD Amount	:
ultiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Anions

Date Sampled : 3/24,26/95 Client Project ID. : 722450.21020/
Date Received : 3/28/95 Lab Project No. : MacDill AFB
Date Prepared : 3/28/95 Method : 95-0983
Date Analyzed : 3/28/95 Detection Limit : EPA 300.0
Matrix : 0.250 mg/L
Matrix : Water

Evergreen Sample #	Client Sample ID	Chloride (mg/L)
X04848	24PZ-1S	27.4
X04849	24PZ-1D	177
X04850	24MP-6S	42.6
X04851	MD32-3	32.8
X04852	MW56-10	11.5
X04853	56MP-6D	41.7
X04854	56MP-6S	27.5
X04855	MW56-1	28.3
X04856	MW56-21	27.8
X04857	56MP-8S	28.2
X04857dup	56MP-8Sdup	28.5
Method Blank 3-28-95		<0.250

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04857	56MP-8S Matrix Spike	10.0	28.2	39.1	110
X04857	56MP-8S Matrix Spike Dup	10.0	28.2	38.3	102
	MS/MSD RPD				7.56
X04857/X04857 Dup	RPD				9.76

Debra L. Ryan
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 3/26,27/95 Client Project ID. : 722450.21020/
Date Received : 3/28/95 Lab Project No. : MacDill AFB
Date Prepared : 3/28/95 Method : 95-0983
Date Analyzed : 3/28/95 Detection Limit : EPA 300.0
Matrix : 0.076 mg/L
Water

Evergreen Sample #	Client Sample ID	Nitrite-N (mg/L)
X04858	56MP-10S	<0.076
X04859	MW56-2	<0.076
X04860	MW56-8	<0.076
X04861	MW56-9	<0.076
X04862	56MP-4S	<0.076
X04863	MW56-12	<0.760*
X04864	MW56-6	<0.076
X04865	56MP-5S	<0.076
X04866	56MP-5D	<0.076
X04867	56MP-15D	<0.076
X04868	MW56-10	<0.076
X04869	56MP-7D	<0.076
X04869Dup	56MP-7D dup	<0.076
Method Blank 3-28-95		<0.076


Quality Assurance**

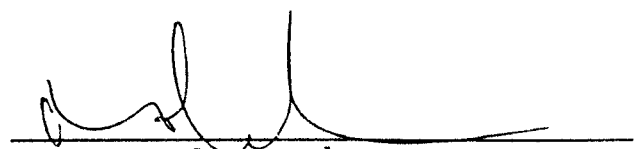
		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04869	56MP-7D Matrix Spike	10.0	<0.250	9.07	90.7
X04869	56MP-7D Matrix Spike Dup	10.0	<0.250	8.88	88.8
	MS/MSD RPD				2.01
X04869/X04869 Dup	RPD				NC

* = Increased detection limit due to matrix interference.

** = Quality assurance results reported as Nitrite (NO₂)

NC = Not calculated because sample and/or duplication results below detection limit.


Analyst


Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 3/24,26/95 Client Project ID. : 722450.21020/
Date Received : 3/28/95 Lab Project No. : MacDill AFB
Date Prepared : 3/28/95 Method : 95-0983
Date Analyzed : 3/28/95 Detection Limit : EPA 300.0
Matrix : 0.056 mg/L
Matrix : Water

Evergreen Sample #	Client Sample ID	Nitrate-N (mg/L)
X04848+	24PZ-1S	<0.056'
X04849+	24PZ-1D	<0.056'
X04850+	24MP-6S	<0.056'
X04851+	MD32-3	<0.056
X04852	MW56-10	0.202
X04853	56MP-6D	<0.056
X04854	56MP-6S	<0.056
X04855	MW56-1	0.992
X04856	MW56-21	0.992
X04857	56MP-8S	<0.056
X04857dup	56MP-8Sdup	<0.056
● Method Blank 3-28-95		<0.056

Quality Assurance**

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04857	56MP-8S	10.0	<0.250	9.21	92.1
	Matrix Spike				
X04857	56MP-8S	10.0	<0.250	8.92	89.2
	Matrix Spike Dup				
	MS/MSD RPD				3.20
X04857/X04857 Dup	RPD				NC

** = Quality assurance results reported as Nitrate (NO₃)
NC = Not calculated because sample and/or duplication results below
detection limit.
+ = Samples received outside of holding times for this analyte.

Debra L. Byrnes
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 3/26,27/95 Client Project ID. : 722450.21020/
Date Received : 3/28/95 Lab Project No. : MacDill AFB
Date Prepared : 3/28/95 Method : 95-0983
Date Analyzed : 3/28/95 Detection Limit : EPA 300.0
Matrix : 0.056 mg/L
Matrix : Water

Evergreen Sample #	Client Sample ID	Nitrate-N (mg/L)
X04858	56MP-10S	<0.056
X04859	MW56-2	<0.056
X04860	MW56-8	<0.056
X04861	MW56-9	0.608
X04862	56MP-4S	<0.056
X04863	MW56-12	0.394
X04864	MW56-6	<0.056
X04865	56MP-5S	0.080
X04866	56MP-5D	<0.056
X04867	56MP-15D	<0.056
X04868	MW56-10	<0.056
X04869	56MP-7D	<0.056
X04869Dup	56MP-7D dup	<0.056
Method Blank 3-28-95		<0.056


Quality Assurance**

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04869	56MP-7D Matrix Spike	10.0	<0.250	8.75	87.5
X04869	56MP-7D Matrix Spike Dup	10.0	<0.250	8.73	87.3
	MS/MSD RPD				0.229
X04869/X04869 Dup	RPD				NC

** = Quality assurance results reported as Nitrate (NO₃)
NC = Not calculated because sample and/or duplication results below
detection limit.



Analyst



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4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 3/24,26/95 Client Project ID. : 722450.21020/
Date Received : 3/28/95 Lab Project No. : MacDill AFB
Date Prepared : 3/28/95 Method : 95-0983
Date Analyzed : 3/28/95 Detection Limit : EPA 300.0
Matrix : 0.250 mg/L
Matrix : Water

Evergreen Sample #	Client Sample ID	Sulfate (mg/L)
X04848	24PZ-1S	1.04
X04849	24PZ-1D	3.56
X04850	24MP-6S	8.12
X04851	MD32-3	99.2
X04852	MW56-10	17.8
X04853	56MP-6D	183
X04854	56MP-6S	67.3
X04855	MW56-1	80.0
X04856	MW56-21	79.4
X04857	56MP-8S	108
X04857dup	56MP-8Sdup	107
Method Blank 3-28-95		<0.250

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04857	56MP-8S Matrix Spike	10.0	108	20.4*	96.2
X04857	56MP-8S Matrix Spike Dup	10.0	108	20.0*	92.2
	MS/MSD RPD				4.25
X04857/X04857 Dup	RPD				0.344

* Spike result based on a 10x dilution factor.

Debra J. Byrum
Analyst

[Signature]
Approved

0983cm.25

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 3/26,27/95 Client Project ID. : 722450.21020/
Date Received : 3/28/95 Lab Project No. : MacDill AFB
Date Prepared : 3/28/95 Method : 95-0983
Date Analyzed : 3/28/95 Detection Limit : EPA 300.0
Matrix : 0.250 mg/L
Water

Evergreen Sample #	Client Sample ID	Sulfate (mg/L)
X04858	56MP-10S	4.61
X04859	MW56-2	46.3
X04860	MW56-8	29.7
X04861	MW56-9	58.7
X04862	56MP-4S	0.395
X04863	MW56-12	42.4
X04864	MW56-6	2.92
X04865	56MP-5S	1.21
X04866	56MP-5D	50.4
X04867	56MP-15D	52.9
X04868	MW56-10	68.6
X04869	56MP-7D	65.1
X04869Dup	56MP-7D dup	65.4
Method Blank 3-28-95		<0.250

Quality Assurance

	Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04869 56MP-7D Matrix Spike	10.0	65.1	75.4	102
X04869 56MP-7D Matrix Spike Dup	10.0	65.1	75.5	104
MS/MSD RPD				1.36
X04869/X04869 Dup RPD				0.368

Debra J. Byers
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Miscellaneous Analyses

Date Sampled : 3/24,26,27/95 Client Project ID. : 722450.21020
Date Received : 3/28/95 Lab Project No. : 95-0983
Date Prepared : 3/30/95 Detection Limit : 5.00 mgCaCO₃/L
Date Analyzed : 3/30/95 Method : EPA 310.1

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Total Alkalinity (mgCaCO₃/L)</u>
X04851	MD32-3	Water	149
X04851 Dup	MD32-3 Dup	Water	150
X04853	56MP-6D	Water	154
X04854	56MP-6S	Water	131
X04866	56MP-5D	Water	123
X04867	56-MP-15D	Water	121
X04868	MW56-10	Water	152
Method blank (3/30/95)			<5.00

Quality Assurance

	<u>True Value (mgCaCO₃/L)</u>	<u>Result (mgCaCO₃/L)</u>	<u>% Recovery</u>
APG Minerals Reference Lot 13862	11.8	10.5	89.0
X04851/X04851 Dup RPD			0.575

Debra L. Byrum
Analyst

[Signature]
Approved

0983cm.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Total Organic Carbon

Date Sampled : 3/24/95	Client Project ID. : 722450.21020/
Date Received : 3/28/95	MacDill AFB
Date Prepared : 3/31/95	Lab Project No. : 95-0983
Date Analyzed : 3/31/95	Method : EPA 415.1
	Matrix : Water
	Detection Limit : 1.00 mg C/L

Evergreen Sample #	Client Sample ID	mg C/Liter
X04850	24MP-6S	30.1
X04851	MD32-3	8.55
<u>95-1009</u>		
X04936	56MP-3S	10.2
X04936 Dup	56MP-3S Dup	10.2
Method Blank (3/31/95)		<1.00

Quality Assurance

		Spike Amount (mg C/L)	Sample Result (mg C/L)	Spike Result (mg C/L)	% Recovery
<u>95-1009</u>					
X04936	Matrix Spike 56MP-3S	10.0	10.2	20.6	103
X04936	Matrix Spike Dup 56MP-3S	10.0	10.2	20.7	104
	MS/MSD RPD				1.15
X04936/X04936	RPD				0.098

Debra L. Byrum
Analyst

[Signature]
Approved

00835m.10

External Standard Report

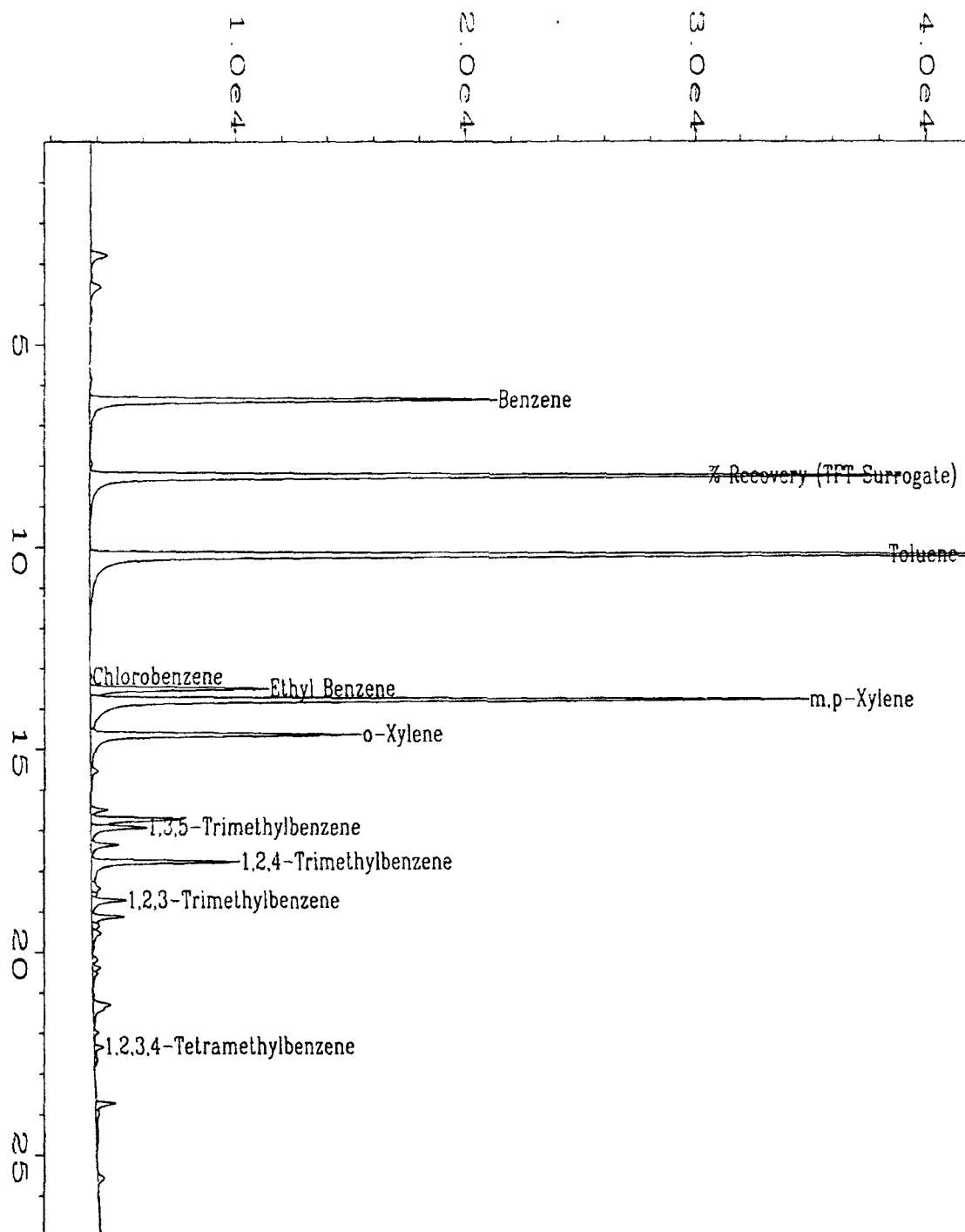
Data File Name : C:\HPCHEM\1\DATA\BX10413\012F0101.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX1 Vial Number : 12
 Sample Name : X04862;250;0.02 Injection Number : 1
 Run Time Bar Code: Sequence Line : 1
 Acquired on : 13 Apr 95 06:57 PM Instrument Method: BX10413A.MTH
 Report Created on: 13 Apr 95 07:24 PM Analysis Method : BX10413A.MTH
 Last Recalib on : 13 APR 95 04:13 PM Sample Amount : 0
 Multiplier : 250 ISTD Amount :
 Sample Info : Project#: 95-0983 Client#: 56MP-4S Water

Sig. 1 in C:\HPCHEM\1\DATA\BX10413\012F0101.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
6.362	120692	PV	0.104	1	3928.657	Benzene = 3929
8.244	238005	VV	0.104	1-R	19894.49	% Recovery (TFT Surrogate) = 80%
10.177	327698	VV	0.096	1	11936.23	Toluene = 11936
13.184	614	PV	0.104	1	47.505	Chlorobenzene
13.485	44051	VV	0.087	1	1778.348	Ethyl Benzene = 1778
13.763	196208	VV	0.095	1	6512.699	m,p-Xylene = 6513
14.628	75627	VV	0.096	1	3061.683	o-Xylene = 3062
16.909	17557	VV	0.105	1	508.633	1,3,5-Trimethylbenzene
17.751	41320	VV	0.096	1	1743.240	1,2,4-Trimethylbenzene = 1743
18.699	10682	VV	0.105	1	376.462	1,2,3-Trimethylbenzene
22.317	3080	VV	0.111	1	14.252	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
2	8.262	8.244	-0.018

Peak holding time
 see F=100
 4/8/95



Data File Name	: C:\HPCHEM\1\DATA\BX10413\012F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X04862;250;0.02	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX1041~ M
Acquired on	: 13 Apr 95 06:57 PM	Analysis Method	: BX1041~ M
Report Created on:	13 Apr 95 07:24 PM	Sample Amount	: 0
Last Recalib on	: 13 APR 95 04:13 PM	ISTD Amount	:
Multiplier	: 250		
Sample Info	: Project#: 95-0983 Client#: 56MP-4S Water		

External Standard Report

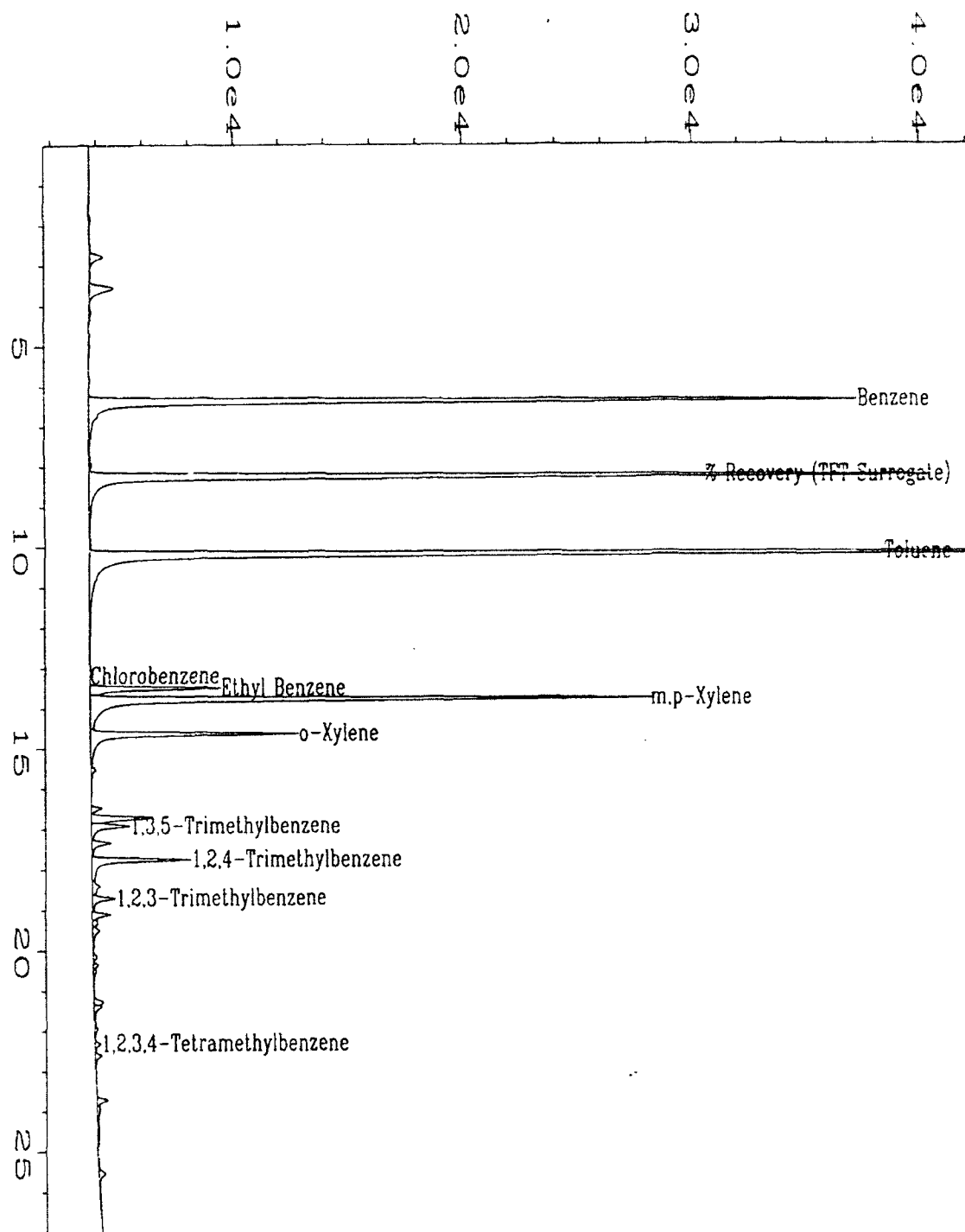
Data File Name : C:\HPCHEM\1\DATA\BX10413\013F0101.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX1 Vial Number : 13
 Sample Name : X04864;250;0.02 Injection Number : 1
 Run Time Bar Code: Sequence Line : 1
 Acquired on : 13 Apr 95 07:36 PM Instrument Method: BX10413A.MTH
 Report Created on: 13 Apr 95 08:04 PM Analysis Method : BX10413A.MTH
 Last Recalib on : 13 APR 95 04:13 PM Sample Amount : 0
 Multiplier : 250 ISTD Amount :
 Sample Info : Project#: 95-0983 Client#: MW56-6 Water

Sig. 1 in C:\HPCHEM\1\DATA\BX10413\013F0101.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
6.357	229474	PV	0.105	1	7478.965	Benzene = 7477
8.242	250991	VV	0.105	1-R	20979.94	% Recovery (TFT Surrogate) = 84%
10.178	349156	VV	0.097	1	12722.18	Toluene = 12722
13.188	114	PV	0.101	1	28.655	Chlorobenzene
13.487	33203	VV	0.089	1	1332.292	Ethyl Benzene = 1332
13.765	154670	VV	0.095	1	5092.296	m,p-Xylene = 5092
14.630	60075	VV	0.098	1	2418.316	o-Xylene = 2418
16.913	12749	VV	0.110	1	344.942	1,3,5-Trimethylbenzene
17.753	29116	VV	0.099	1	1205.224	1,2,4-Trimethylbenzene = 1205
18.700	7388	VV	0.107	1	208.066	1,2,3-Trimethylbenzene
22.311	1739	VV	0.108	1	-65.020	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
2	8.262	8.242	-0.020

*past holding
time
etc*



Data File Name	: C:\HPCHEM\1\DATA\BX10413\013F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 13
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X04864;250;0.02	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10413.MT
Acquired on	: 13 Apr 95 07:36 PM	Analysis Method	: BX10413.MT
Report Created on	: 13 Apr 95 08:04 PM	Sample Amount	: 0
Last Recalib on	: 13 APR 95 04:13 PM	ISTD Amount	:
Multiplier	: 250		
Sample Info	: Project#: 95-0983 Client#: MW56-6 Water		



CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Project #: 95-0954

Parsons Engineering Science, Inc. (PES) Project: MacDill AFB
(722450.21020)

Sample Receipt

On March 24, 1995, 13 water samples, 7 soil samples and one trip blank were received at EAL in good condition with the following discrepancies: Sample bottles were not included for TOC analysis for MD42-1 and 24MP-5D. The instructions at the bottom of page 1 of the chain of custody request field blank analyses, however, a field blank was not included in the cooler.

Three sets of matrix spike and matrix spike duplicate samples were included for previous sample shipments. These aliquots had already been taken from extra sample volume, therefore, 24MP-6S, 74SS-4 and 56SS-2 MS/MSD samples were not analyzed. Todd Wiedemeier was notified by FAX on March 24, 1995.

The trip blank was analyzed for BTEX only per instructions from Leigh Benson on March 22, 1995.

Refer to the EAL Sample Log Sheet for specific Log-in information and cross-reference of EAL and PES sample identifications.

BTEX, Water and Soil Matrix, Methods SW8020 and 602

Sample 24MP-1S was analyzed at dilution factors of one and 100 due to the presence of analytes of interest in the sample. Both data sets are reported.

The Method Blank MB040495 was contaminated with chlorobenzene at 0.7 UG/L. Any affected data are flagged "B". There were no other quality control anomalies to report.

Total Volatile Hydrocarbon (TVH), Water and Soil Matrix, Method 8015M

There were no quality control anomalies to report.

Page Two
Case Narrative
Parsons Engineering Science
95-0954

Total Extractable Hydrocarbons (TEH) Soil Matrix, Method 8015M,
Jet-A

There were no quality control anomalies to report. Please note however, that the sample chromatogram 24SS-2, indicates the presence of significant levels of hydrocarbons with a boiling range greater than Jet Fuel. Laboratory duplicate analysis confirms results which do not match jet fuel pattern.

General Chemistry

There were no quality control anomalies to report.



Patricia A. McClellan, Project Manager

Evergreen Analytical Sample Log Sheet

Project # 95-0954

Date(s) Sampled: 03/22-23, /95 COC

Date Due: 03/29/95-UST

Date Received: 03/24/95 1000

Holding Time(s): 03/24, 25-NO₂, NO₃

Client Project I.D. 722450.21020/MACDILL AFB

0407/95-OTHERS

04/5-6-BTEX, TVH, TEH, ALKALINITY

Client: Parsons Engineering Science, Inc.

Shipping Charges N/A

Address: 1700 Broadway Suite 900

E.A. Cooler # 606

Denver, CO 80290

Airbill # FEDEX 9581826446

Contact: TODD WIEDEMEIR

Custody Seal Intact? Y

Client P.O. 722450.21020

Cooler X Bottles Y

Phone #831-8100 Fax #831-8208

COC Present Y

Sample Tags Present? Y

Sample Tags Listed? Y

Sample(s) Sealed? Y

Special Instructions SPLUS CLOROBENZENE, TEMB & TMB. REPORT ALL SOILS ON A

DRY WEIGHT BASIS. ANALYZE AN MS/MSD & LAB DUPLICATE FOR THIS CLIENT. SAMPLE

DATES ON COC INCORRECT; 3/23 & 3/24 SHOULD BE 3/22 & 3/23 RESPECTIVELY. SAMPLES

X04764-69 ARE ON HOLD UNLESS EXTRA SAMPLE VOLUME NECESSARY FOR MS/MSD. THESE

ARE THE QC SAMPLES FOR PROJECT #95-0820, -0871 AND -0915.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04750A/B	MD24-8	SBTEX 602	W	40V	#2
X04751A/B	24MP-2D	SBTEX 602	W	40V	#2
X04752A/B	24MP-2S	SBTEX 602	W	40V	#2
X04753A/B	24MP-1D	SBTEX 602	W	40V	#2
X04754A/B	24MP-1S	SBTEX 602	W	40V	#2
X04755A/B	MD24-2	SBTEX 602	W	40V	#2
X04756A/B	MD24-5	SBTEX 602	W	40V	#2
X04757A/B	24MP-4S	SBTEX 602	W	40V	#2
X04758A/B	MD24-4	SBTEX 602	W	40V	#2
X04759A/B	MD24-41	SBTEX 602	W	40V	#2
X04760A/B	MD24-3	SBTEX 602	W	40V	#2
X04761A/B	MD24-1	SBTEX 602	W	40V	#2
X04762A/B	24MP-5D	SBTEX 602	W	40V	#2
X04770A/B	24SS-2	SBTEX 8020	S	4WM	#2
X04763	TRIP BLANK	S BTEX, TVH	W	40V	#2
X04770E	24SS-2	TEPH 8015	S	4WM	CR1
X04750C/D	MD24-8	TVPH 8015	W	40V	#2

R=Sample to be returned

Route GC/MS GC 3 Metals Wet Chem 2 SxPrep 1 Acctg 1

To

SxRec C QA/QC C Sales C File Orig

Custodian/Date: W. J. B. 3/23/95
Prn 3/27/95

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04751C/D	24MP-2D	TVPH 8015	W	40V	#2
X04752C/D	24MP-2S	TVPH 8015	W	40V	#2
X04753C/D	24MP-1D	TVPH 8015	W	40V	#2
X04754C/D	24MP-1S	TVPH 8015	W	40V	#2
X04755C/D	MD24-2	TVPH 8015	W	40V	#2
X04756C/D	MD24-5	TVPH 8015	W	40V	#2
X04757C/D	24MP-4S	TVPH 8015	W	40V	#2
X04758C/D	MD24-4	TVPH 8015	W	40V	#2
X04759C/D	MD24-41	TVPH 8015	W	40V	#2
X04760C/D	MD24-3	TVPH 8015	W	40V	#2
X04761C/D	MD24-1	TVPH 8015	W	40V	#2
X04762C/D	24MP-5D	TVPH 8015	W	40V	#2
X04770C/D	24SS-2	TVPH 8015	S	4WM	#2
X04750F	MD24-8	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04751E	24MP-2D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04752E	24MP-2S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04753E	24MP-1D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04754E	24MP-1S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04755E	MD24-2	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04756E	MD24-5	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04757E	24MP-4S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04758E	MD24-4	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04759E	MD24-41	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04760E	MD24-3	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04761E	MD24-1	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04762E	24MP-5D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CR1
X04756F	MD24-5	TOC	W	125A	CR1
X04760F	MD24-3	TOC	W	125A	CR1
X04761F	MD24-1	TOC	W	125A	CR1
X04762F	24MP-5D	TOC	W	125A	CR1
X04750E	MD24-8	ALKALINITY	W	250P	CR1
X04764A/B	MAT.SP.24MP-6S	HOLD	S	4WM	#2
X04765A/B	MAT.SP.DUP.24MP-6S	HOLD	S	4WM	#2
X04766A/B	MAT.SP.75SS-4	HOLD	S	4WM	#2
X04767A/B	MAT.SP.DUP.75SS-4	HOLD	S	4WM	#2
X04768A/B	MAT.SP.56SS-2	HOLD	S	4WM	#2
X04769A/B	MAT.SP.DUP.56SS-2	HOLD	S	4WM	#2

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04764C/D	MAT.SP.24MP-6S	HOLD	S	4WM	#2
X04765C/D	MAT.SP.DUP.24MP-6S	HOLD	S	4WM	#2
X04766C/D	MAT.SP.75SS-4	HOLD	S	4WM	#2
X04767C/D	MAT.SP.DUP.75SS-4	HOLD	S	4WM	#2
X04768C/D	MAT.SP.56SS-2	HOLD	S	4WM	#2
X04769C/D	MAT.SP.DUP.56SS-2	HOLD	S	4WM	#2
X04764E	MAT.SP.24MP-6S	HOLD	S	4WM	CR1
X04765E	MAT.SP.DUP.24MP-6S	HOLD	S	4WM	CR1
X04766E	MAT.SP.75SS-4	HOLD	S	4WM	CR1
X04767E	MAT.SP.DUP.75SS-4	HOLD	S	4WM	CR1
X04768E	MAT.SP.56SS-2	HOLD	S	4WM	CR1
X04769E	MAT.SP.DUP.56SS-2	HOLD	S	4WM	CR1
X04764F	MAT.SP.24MP-6S	HOLD	S	2WM	CR1
X04765F	MAT.SP.DUP.24MP-6S	HOLD	S	2WM	CR1
X04766F	MAT.SP.75SS-4	HOLD	S	2WM	CR1
X04767F	MAT.SP.DUP.75SS-4	HOLD	S	2WM	CR1
X04768F	MAT.SP.56SS-2	HOLD	S	2WM	CR1
X04769F	MAT.SP.DUP.56SS-2	HOLD	S	2WM	CR1
X04764G	MAT.SP.24MP-6S	HOLD	S	125A	CR1
X04765G	MAT.SP.DUP.24MP-6S	HOLD	S	125A	CR1
X04766G	MAT.SP.75SS-4	HOLD	S	125A	CR1
X04767G	MAT.SP.DUP.75SS-4	HOLD	S	125A	CR1
X04768G	MAT.SP.56SS-2	HOLD	S	125A	CR1
X04769G	MAT.SP.DUP.56SS-2	HOLD	S	125A	CR1

Page 2 of 3 Pages

Project # 95-0954

R=Sample to be returned

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY PARSONS ES
ADDRESS 700 Broadway Ste 900
CITY Denver STATE CO ZIP 80290
PHONE # 831-8100 FAX #

CLIENT CONTACT (print)

PROJECT I.D. Mc D. U AT-3

REAL QUOTE # _____ P.O. # _____

TURNAROUND REQUIRED: 30

***expedited turnaround subject to additional fee**

Sampler Name: And Varnity
(signature)
(print) Mask Vossely

Evergreen Analytical Cooler No. _____
Cooler Received _____

PRINT

Please **PRINT**
all information:

CLIENT	SAMPLE	DATE	SAMPLED	TIME
--------	--------	------	---------	------

ANALYSIS REQUESTED					
MATRIX	No. of Containers	DATE SAMPLED	TIME	EAL Sample No.	EAL use only Do not write in shaded area
Water / Drinking / Discharge / Ground (circle)	6	3/23/95	10:15	X04750	EAL Project # 0954 Custodian _____ Location 2, CRI Container Size
Soil / Solid	5	3/23/95	13:25	51	
Oil / Sludge	5	3/23/95	14:10	52	
TCP VOA/BNA/Pes/Herb/Metals (circle)	5	3/23/95	15:10	53	
VOA B260/624/524.2 (circle)	5	3/24/95	8:20	54	
BNA B270/625 (circle)	5	3/24/95	9:35	55	
Pesticides B080/608 (circle)	5	3/24/95	10:40	56	
Pest/PCBs B080/608/508 (circle)	5	3/24/95	11:50	57	
Herbicides B150/515 (circle)	5	3/24/95	12:40	58	
PCB Screen	5	3/24/95	12:40	59	
BTEX B020/602 (circle) MTBE (circle) and TMS & ESTERS	5	3/24/95	11:50		
TPH 418.1/Oil & Grease 413.1 (circle)	5	3/24/95	11:50		
TPPH 8015mod. (Gasoline) 40V	5	3/24/95	11:50		
TPPH 8015mod. (Diesel)	5	3/24/95	11:50		
Total Metals-DW / NPDES / SW946 (circle & list metals below)	5	3/24/95	11:50		
Dissolved Metals - DW / SW846 (circle & list metals below)	5	3/24/95	11:50		
Aikala 1-1-250P	5	3/24/95	11:50		
Aircons (CI, SA, ME, etc.) 125P	5	3/24/95	11:50		
Asphalt	5	3/24/95	11:50		

Instructions: All Samples in T.C.C.

Please Analyze Trip Blank and field Blank for BTEX, Toluene, Stalinity, and Groundwater DATES 3/23 + 3/24 should be 3/22 and 3/23 respectively.

Evergreen Analytical Inc.

COMPANY Parsons E.S.
ADDRESS 1700 Broadway, Suite
CITY Denver STATE CO ZIP 80202
PHONE# 303-631-0100 FAX#

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

CLIENT CONTACT (print) Tasha Hicks
PROJECT I.D. Mac Dice Aff P.O.# 722
TURNAROUND REQUIRED* 30 d

Sampler Name:

(signature) Mark Linnell

(print) Mark Linnell

Evergreen Analytical Cooler No.

Cooler Received

Please PRINT

all information:

CLIENT
SAMPLE

SAMPLE IDENTIFICATION	DATE SAMPLED	TIME
-----------------------	--------------	------

[illegible]

Instructions: See pg 1

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
<i>[Signature]</i>	3/3/21	<i>[Signature]</i>	

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Page 3 of 3

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400



COMPANY Parsons ES
ADDRESS 1700 Broadway Ste 900
CITY Denver STATE CO ZIP 80202
PHONE# 831-8100 FAX #
TURNAROUND REQUIRED*

CLIENT CONTACT (print) J. Hicks

PROJECT I.D. MA2D.11 APB

EAL QUOTE # P.O.# 722450.21424

*expedited turnaround subject to additional fee

Sampler Name: _____

(signature) _____

(print) _____

Evergreen Analytical Cooler No. _____

Cooler Received _____

Please **PRINT**

all information:

CLIENT
SAMPLE

IDENTIFICATION DATE
SAMPLED SAMPLED TIME

No. of Containers

MATRIX	ANALYSIS REQUESTED														EAL Sample No.	EAL use only Do not write in shaded area			
	Water-Drinking/Discharge/Ground (circle)	Soil / Solid	Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8270/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TPH 418.1/Oil & Grease 413.1 (circle)	TPH 8015mod (Gasoline) 4um	TPH 8015mod (Diesel) 4um			Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Moisture 2 um
Matrix Spike 7585-4																			X04764
Matrix Spike 7585-4																			65
Matrix Spike 7585-4																			66
Matrix Spike 7585-4																			67
Matrix Spike 7585-4																			68
Matrix Spike 7585-4																			69
Matrix Spike 7585-4																			70
2HSS-2																			
HT:																			Location Q, CR1
DD:																			Container Size

Instructions:

Date & Time Rec'd: 3/24/95 1700 Shipped Via: APD Fed Ex 9488

Client: PARSONS ES

(Airbill # if applicable)

95818264

Client Project ID(s): Mac Dill AFB

EAL Project #(s): 95-0954

EAL Cooler(s): (Y) N

Cooler# 606

Ice packs (Y) N Y N Y N Y N Y N

Temperature °C cold

- | | Y | N | N/A |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Custody seal(s) present: | <input checked="" type="checkbox"/> | | |
| Seals on cooler intact | <input checked="" type="checkbox"/> | | |
| Seals on bottle intact | | | <input checked="" type="checkbox"/> |
| 2. Chain of Custody present: | <input checked="" type="checkbox"/> | | |
| 3. Containers broken or leaking: | | <input checked="" type="checkbox"/> | |
| (Comment on COC if Y) | | | |
| 4. Containers labeled: | <input checked="" type="checkbox"/> | | |
| 5. COC agrees w/ bottles received: | <input checked="" type="checkbox"/> | | |
| (Comment on COC if N) | | | |
| 6. COC agrees w/ labels: | <input checked="" type="checkbox"/> | | |
| (Comment on COC if N) | | | |
| 7. Headspace in VOA vials-waters only | | | <input checked="" type="checkbox"/> |
| (comment on COC if Y) | | | |
| 8. VOA samples preserved: | | | <input checked="" type="checkbox"/> |
| 9. pH measured on metals, cyanide or phenolics*: | | | <input checked="" type="checkbox"/> |
| List discrepancies | | | |
| *Non-EAL provided containers only, water samples only. | | | |
| 10. Metal samples present: | | | <input checked="" type="checkbox"/> |
| Total _____, Dissolved _____ | | | |
| D or PD to be filtered: | | | |
| T,TR,D,PD to be Preserved: | | | |
| 11. Short holding times: | | <input checked="" type="checkbox"/> | |
| Specify parameters | | | |
| 12. Multi-phase sample(s) present: | | <input checked="" type="checkbox"/> | |
| 13. COC signed w/ date/time: | <input checked="" type="checkbox"/> | | |

Comments: _____

(Additional comments on back)

Custodian Signature/Date: Lee Turner 3/24/95

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY PARSONS ES
ADDRESS 700 Broadway Ste 900
CITY NEWARK STATE CA ZIP 90790
PHONE # 831-8100 FAX #

CLIENT CONTACT (print) John Hicks
PROJECT I.D. ALC D, U ATF-B
PO # 722450.7102
REAL QUOTE # _____

TURNAROUND REQUIRED* 30 days
expedited turnaround subject to additional fee

Sampler Name: And Christ
(signature)

(print) Mark Vassely

Evergreen Analytical Cooler No. _____

Cooler Received _____

PRINT

PRIN
Please
all information:

CLIENT	SAMPLE	DATE	SAMPLED	TIME
IDENTIFICATION				

MO 24-8	3/23/95	10:15
MO 24MP-20	3/23/95	13:25
24MP-25	3/23/95	14:10
24MP-10	3/23/95	15:10
24MP-15	3/24/95	8:20
MO 24-2	3/24/95	9:35
MO 24-5	3/24/95	10:40
24MP-45	3/24/95	11:50
MO 24-4	3/24/95	12:40
MO 24-41	3/24/95	12:40

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[illegible]

Instructions: All Samples in TCC

1) Please analyze trip Blank and feed Blank for BTEX, TWA, Alkalinity, Ac

- Gas- and water - DATES 3/23 3/24 should be 3/22 and 3/23 specify,

Approved by (signature) _____ Date/Time (Received by Specimen) _____ Date/Time (Received by Specimen) _____

CHAIN OF CUSTODY RECORD

Page 2 of 3

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400
FAX RESULTS Y / N

COMPANY Wizards E.S.
ADDRESS 1700 Broadway Suite 500
CITY Denver STATE CO ZIP 80290
PHONE# 303-631-8100 FAX#

Sampler Name:

(signature) Made Laid
(print) MADE LAID

Evergreen Analytical Cooler No. _____
Cooler Received _____

Index

Please
PRIN
all information:

CLIENT
SAMPLE

SAMPLE IDENTIFICATION	DATE SAMPLED	TIME
--------------------------	-----------------	------

MO24-3	3/24/95	1400
11124-1	3/24/95	1445
24000-50	3/24/95	4:20
1003 2360-6-		

[illegible]

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DD:

Instructions: See p. 5

Relinquished by (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
<i>[Signature]</i>	7/6/08	<i>[Signature]</i>	7/6/08	<i>[Signature]</i>	7/6/08	<i>[Signature]</i>	7/6/08

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Page 3 of 3

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400



COMPANY Parsons ES

ADDRESS 1700 Broadway Ste 900

CITY Denver STATE CO ZIP 80202

PHONE # 831-8100

FAX #

CLIENT CONTACT (print) J. Hicks

PROJECT I.D. Alameda APB

EAL QUOTE # P.O. # 722450.21022

TURNAROUND REQUIRED*

*expedited turnaround subject to additional fee

Sampler Name:

(signature) _____

(print) _____

Evergreen Analytical Cooler No. _____

Cooler Received _____

Please **PRINT**

all information:

CLIENT
SAMPLE

IDENTIFICATION SAMPLED DATE TIME

Alameda Spill Site	1500-4	3-22-95	0930
Alameda Spill Site	1500-5	3-22-95	0930
Alameda Spill Site	1500-6	3-22-95	0940
Alameda Spill Site	1500-7	3-22-95	0940
Alameda Spill Site	1500-8	3-22-95	0940
Alameda Spill Site	1500-9	3-22-95	0940
Alameda Spill Site	1500-10	3-22-95	0940
Alameda Spill Site	1500-11	3-22-95	0940
Alameda Spill Site	1500-12	3-22-95	0940
Alameda Spill Site	1500-13	3-22-95	0940
Alameda Spill Site	1500-14	3-22-95	0940
Alameda Spill Site	1500-15	3-22-95	0940
Alameda Spill Site	1500-16	3-22-95	0940
Alameda Spill Site	1500-17	3-22-95	0940
Alameda Spill Site	1500-18	3-22-95	0940
Alameda Spill Site	1500-19	3-22-95	0940
Alameda Spill Site	1500-20	3-22-95	0940
Alameda Spill Site	1500-21	3-22-95	0940
Alameda Spill Site	1500-22	3-22-95	0940
Alameda Spill Site	1500-23	3-22-95	0940
Alameda Spill Site	1500-24	3-22-95	0940
Alameda Spill Site	1500-25	3-22-95	0940
Alameda Spill Site	1500-26	3-22-95	0940
Alameda Spill Site	1500-27	3-22-95	0940
Alameda Spill Site	1500-28	3-22-95	0940
Alameda Spill Site	1500-29	3-22-95	0940
Alameda Spill Site	1500-30	3-22-95	0940
Alameda Spill Site	1500-31	3-22-95	0940
Alameda Spill Site	1500-32	3-22-95	0940
Alameda Spill Site	1500-33	3-22-95	0940
Alameda Spill Site	1500-34	3-22-95	0940
Alameda Spill Site	1500-35	3-22-95	0940
Alameda Spill Site	1500-36	3-22-95	0940
Alameda Spill Site	1500-37	3-22-95	0940
Alameda Spill Site	1500-38	3-22-95	0940
Alameda Spill Site	1500-39	3-22-95	0940
Alameda Spill Site	1500-40	3-22-95	0940
Alameda Spill Site	1500-41	3-22-95	0940
Alameda Spill Site	1500-42	3-22-95	0940
Alameda Spill Site	1500-43	3-22-95	0940
Alameda Spill Site	1500-44	3-22-95	0940
Alameda Spill Site	1500-45	3-22-95	0940
Alameda Spill Site	1500-46	3-22-95	0940
Alameda Spill Site	1500-47	3-22-95	0940
Alameda Spill Site	1500-48	3-22-95	0940
Alameda Spill Site	1500-49	3-22-95	0940
Alameda Spill Site	1500-50	3-22-95	0940
Alameda Spill Site	1500-51	3-22-95	0940
Alameda Spill Site	1500-52	3-22-95	0940
Alameda Spill Site	1500-53	3-22-95	0940
Alameda Spill Site	1500-54	3-22-95	0940
Alameda Spill Site	1500-55	3-22-95	0940
Alameda Spill Site	1500-56	3-22-95	0940
Alameda Spill Site	1500-57	3-22-95	0940
Alameda Spill Site	1500-58	3-22-95	0940
Alameda Spill Site	1500-59	3-22-95	0940
Alameda Spill Site	1500-60	3-22-95	0940
Alameda Spill Site	1500-61	3-22-95	0940
Alameda Spill Site	1500-62	3-22-95	0940
Alameda Spill Site	1500-63	3-22-95	0940
Alameda Spill Site	1500-64	3-22-95	0940
Alameda Spill Site	1500-65	3-22-95	0940
Alameda Spill Site	1500-66	3-22-95	0940
Alameda Spill Site	1500-67	3-22-95	0940
Alameda Spill Site	1500-68	3-22-95	0940
Alameda Spill Site	1500-69	3-22-95	0940
Alameda Spill Site	1500-70	3-22-95	0940
Alameda Spill Site	1500-71	3-22-95	0940
Alameda Spill Site	1500-72	3-22-95	0940
Alameda Spill Site	1500-73	3-22-95	0940
Alameda Spill Site	1500-74	3-22-95	0940
Alameda Spill Site	1500-75	3-22-95	0940
Alameda Spill Site	1500-76	3-22-95	0940
Alameda Spill Site	1500-77	3-22-95	0940
Alameda Spill Site	1500-78	3-22-95	0940
Alameda Spill Site	1500-79	3-22-95	0940
Alameda Spill Site	1500-80	3-22-95	0940
Alameda Spill Site	1500-81	3-22-95	0940
Alameda Spill Site	1500-82	3-22-95	0940
Alameda Spill Site	1500-83	3-22-95	0940
Alameda Spill Site	1500-84	3-22-95	0940
Alameda Spill Site	1500-85	3-22-95	0940
Alameda Spill Site	1500-86	3-22-95	0940
Alameda Spill Site	1500-87	3-22-95	0940
Alameda Spill Site	1500-88	3-22-95	0940
Alameda Spill Site	1500-89	3-22-95	0940
Alameda Spill Site	1500-90	3-22-95	0940
Alameda Spill Site	1500-91	3-22-95	0940
Alameda Spill Site	1500-92	3-22-95	0940
Alameda Spill Site	1500-93	3-22-95	0940
Alameda Spill Site	1500-94	3-22-95	0940
Alameda Spill Site	1500-95	3-22-95	0940
Alameda Spill Site	1500-96	3-22-95	0940
Alameda Spill Site	1500-97	3-22-95	0940
Alameda Spill Site	1500-98	3-22-95	0940
Alameda Spill Site	1500-99	3-22-95	0940
Alameda Spill Site	1500-100	3-22-95	0940

No. of Containers	5
Water/Drinking/Discharge/Ground	X
Soil / Solid	X
Oil / Sludge	

HT:

DD:

Instructions:

ANALYSIS REQUESTED															EAL use only Do not write in shaded area	
MATRIX																
No. of Containers	Water-Drinking/Discharge/Ground (circle)															
	Soil / Solid															
	Oil / Sludge															
	TCLP VOA/BNA/Pest/Herb/Metals (circle)															
	VOA 8260/624/524.2 (circle)															
	BNA 8270/625 (circle)															
	Pesticides 8080/608 (circle)															
	Pest/PCBs 8080/608/508 (circle)															
	Herbicides 8150/515 (circle)															
	PCB Screen															
	BTEX 8020/602 (circle)/MTBE (circle)															
	TPPH 418.1/Oil & Grease 413.1 (circle)															
	TPPH 8015mod. (Gasoline)															
	TEPH 8015mod. (Diesel)															
	Total Metals-DW / NPDES / SW846 (circle & list metals below)															
Dissolved Metals - DW / SW846 (circle & list metals below)																
Mutagens																
TC																

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040395
Date Prepared : 4/3/95
Date Analyzed : 4/3/95

Client Project No. : 722450.21020
Lab Project No. : 95-0954
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040318

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 99% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

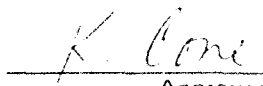
B = Compound also found in the blank.

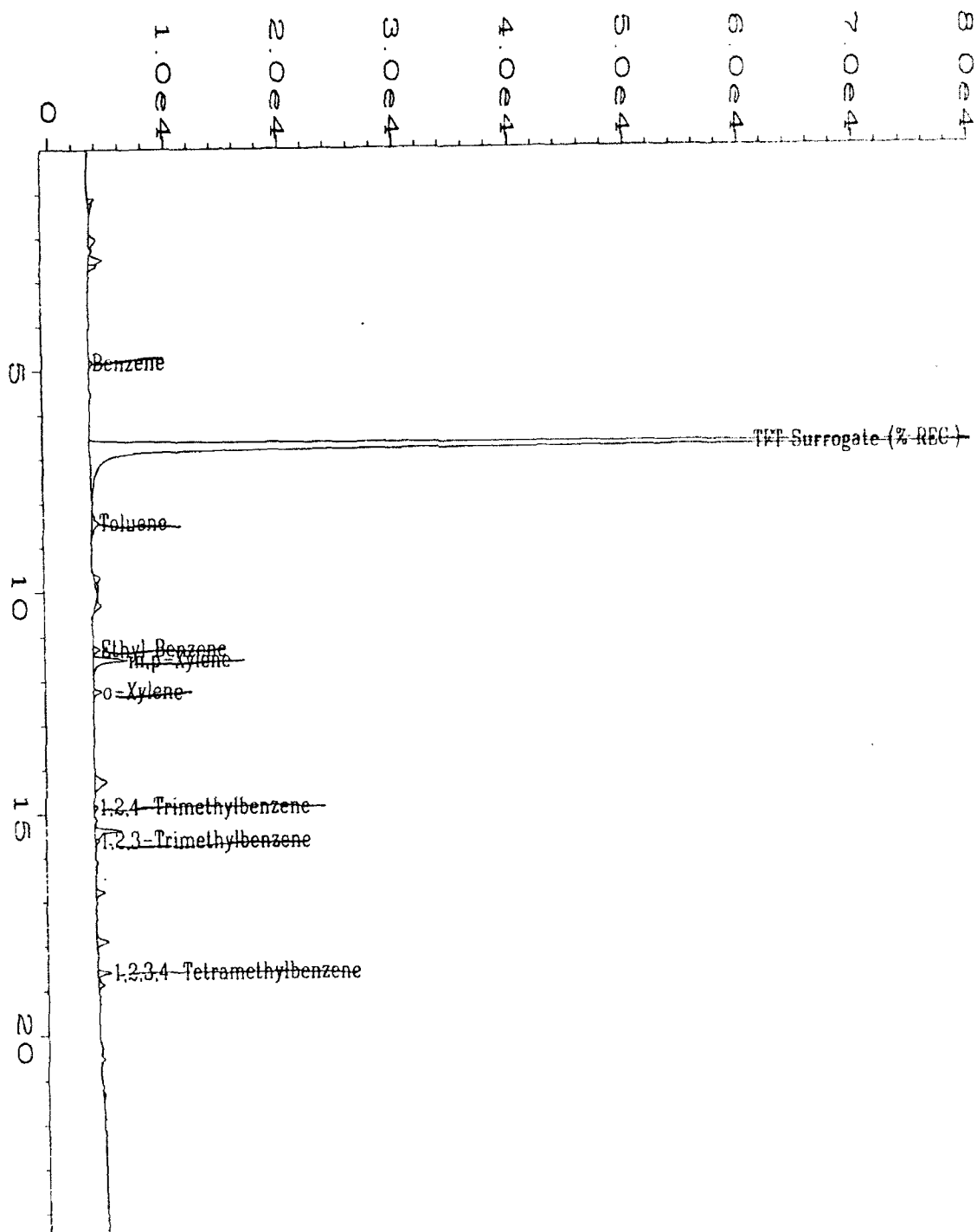
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20403\018R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB040395	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX2040 T
Acquired on	: 03 Apr 95 02:56 PM	Analysis Method	: BX2040 T
Report Created on	: 10 Apr 95 04:41 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 04:19 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040495
Date Prepared : 4/4/95
Date Analyzed : 4/4/95

Client Project No. : 722450.21020
Lab Project No. : 95-0954
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040409

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.7	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 97% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

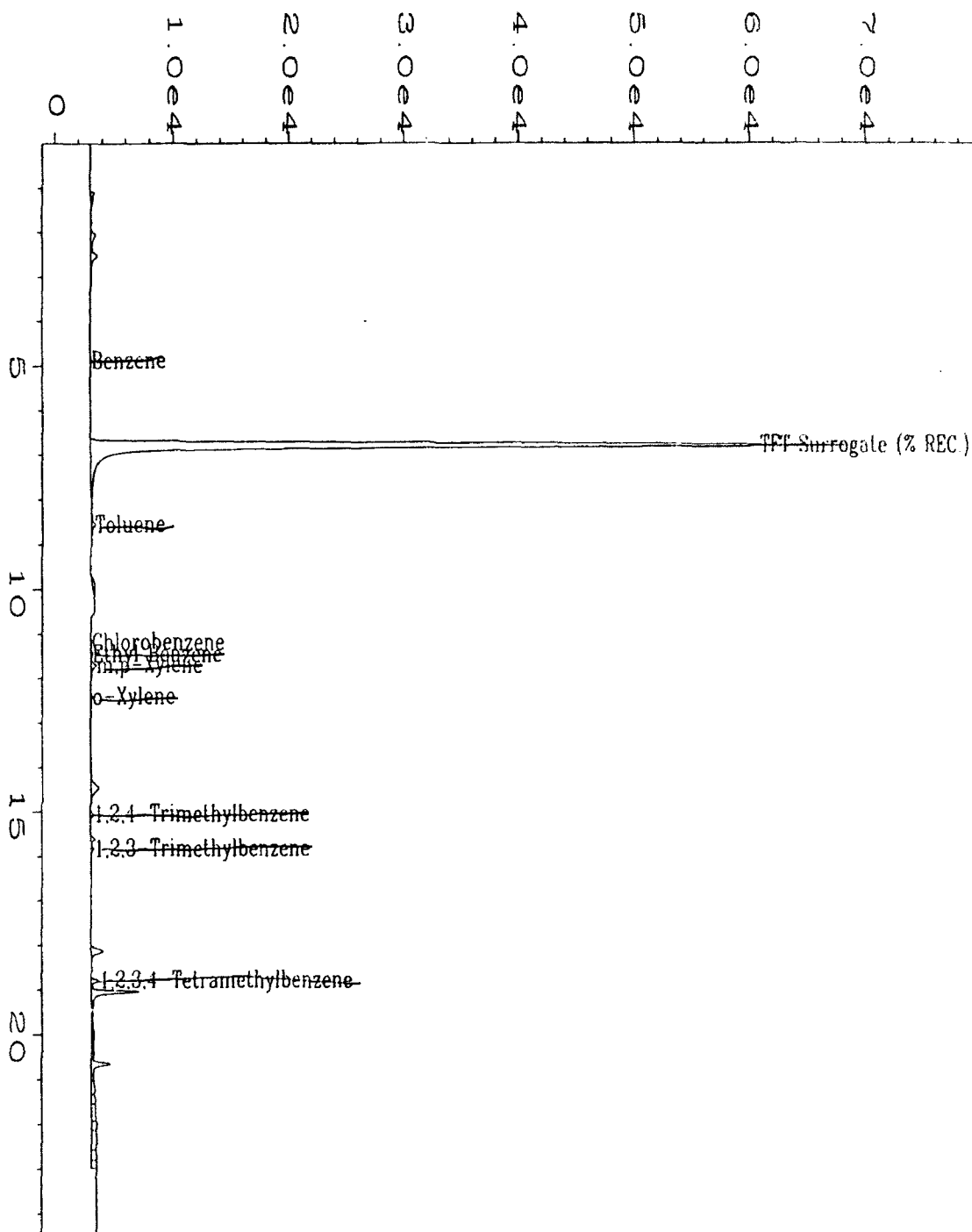
J = Indicates an estimated value when the compound is detected, but is below the Reporting
Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : E:\2\DATA\BX20404\009R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : MB040495
 Run Time Bar Code:
 Acquired on : 04 Apr 95 06:01 AM
 Report Created on: 26 Apr 95 05:52 PM
 Last Recalib on : 14 APR 95 02:10 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 9
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20404 "T"
 Analysis Method : BX2040 "I"
 Sample Amount : 0
 ISTD Amount :

pmc 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040595
Date Prepared : 4/5/95
Date Analyzed : 4/5/95

Client Project No. : 722450.21020
Lab Project No. : 95-0954
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1040509

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 93% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

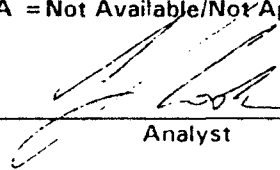
U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

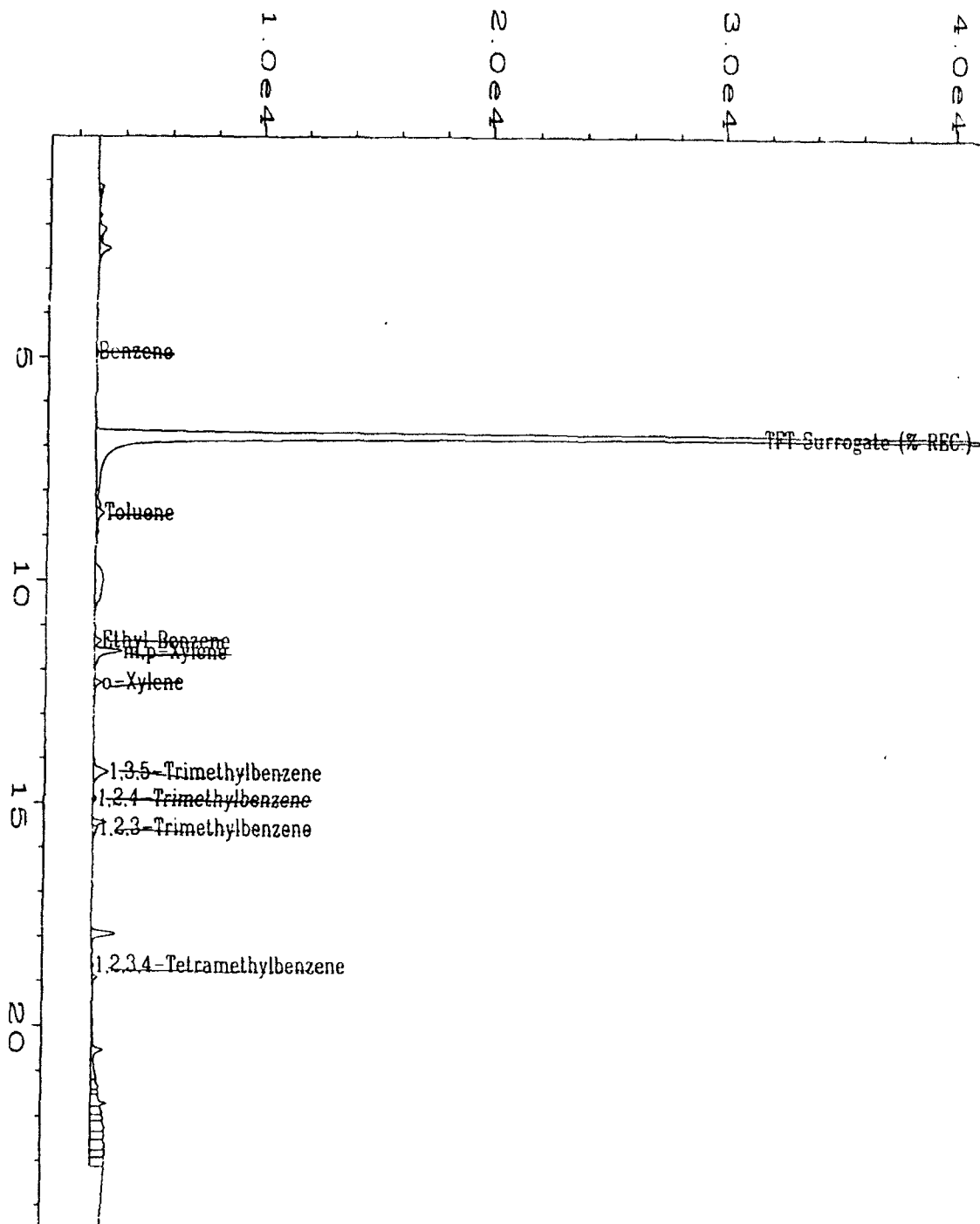
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20405\009R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB040595	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20405.MTH
Acquired on	: 05 Apr 95 04:21 PM	Analysis Method	: BX20405
Report Created on:	06 Apr 95 08:31 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		

pr 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB040695
Date Extracted/Prepared : 4/6/95
Date Analyzed : 4/6/95

Client Project No. : 722450.21020
Lab Project No. : 95-0954
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040609

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	1.0
Toluene	108-88-3	U	1.0
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	U	1.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	1.0
1,3,5-Trimethylbenzene	108-67-8	U	1.0
1,2,4-Trimethylbenzene	95-63-6	U	1.0
1,2,3-Trimethylbenzene	526-73-8	U	1.0
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 105% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.


U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

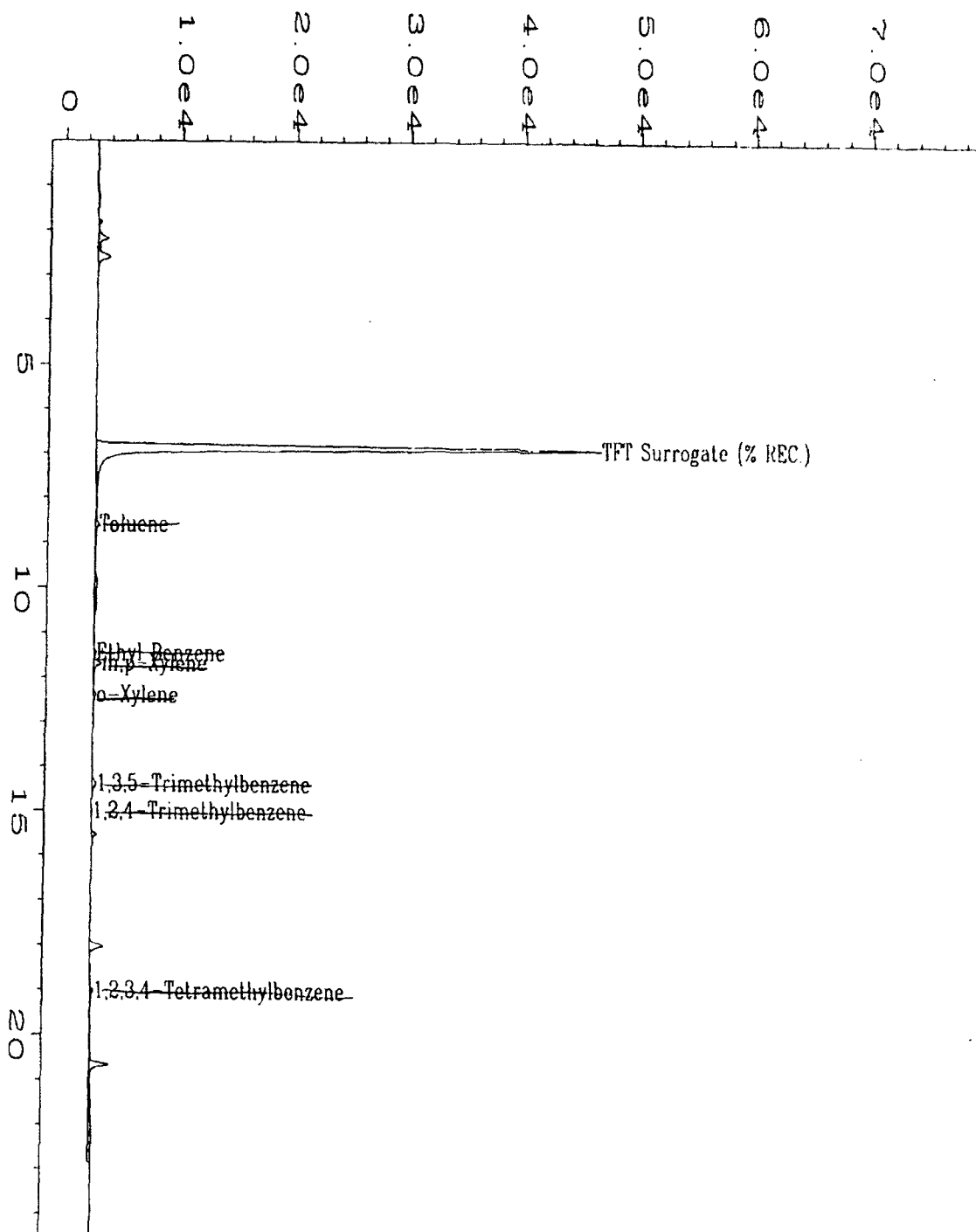
J = Indicates an estimated value when the compound is detected, but is below the Reporting
Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : C:\HPCHEM\2\DATA\BX20406\009R0801.D

Operator : C.J. Cook

Instrument : BTEX2

Sample Name : MB040695

Run Time Bar Code:

Acquired on : 06 Apr 95 02:47 PM

Report Created on: 14 Apr 95 02:46 PM

Last Recalib on : 07 APR 95 07:38 AM

Multiplier : 1

Page Number : 1

Vial Number : 9

Injection Number : 1

Sequence Line : 8

Instrument Method: BX2040

Analysis Method : BX2040

Sample Amount : 0

ISTD Amount :

Prn 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-2S J	Client Project No.	: 722450.21020
Lab Sample Number	: X04752	Lab Project No.	: 95-0954
Date Sampled	: 3/22/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/3/95	Matrix	: Water
Date Analyzed	: 4/3/95	Lab File No.	: BX2040326
		Method Blank No.	: MB040395

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	3.9	0.4
Toluene	108-88-3	14	0.4
Chlorobenzene	108-90-7	1.8	0.4
Ethyl Benzene	100-41-4	14	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	2.5	0.4
1,3,5-Trimethylbenzene	108-67-8	10	0.4
1,2,4-Trimethylbenzene	95-63-6	29	0.4
1,2,3-Trimethylbenzene	526-73-8	7.8	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	81%	70%-130% (QC limits)
---	-----	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

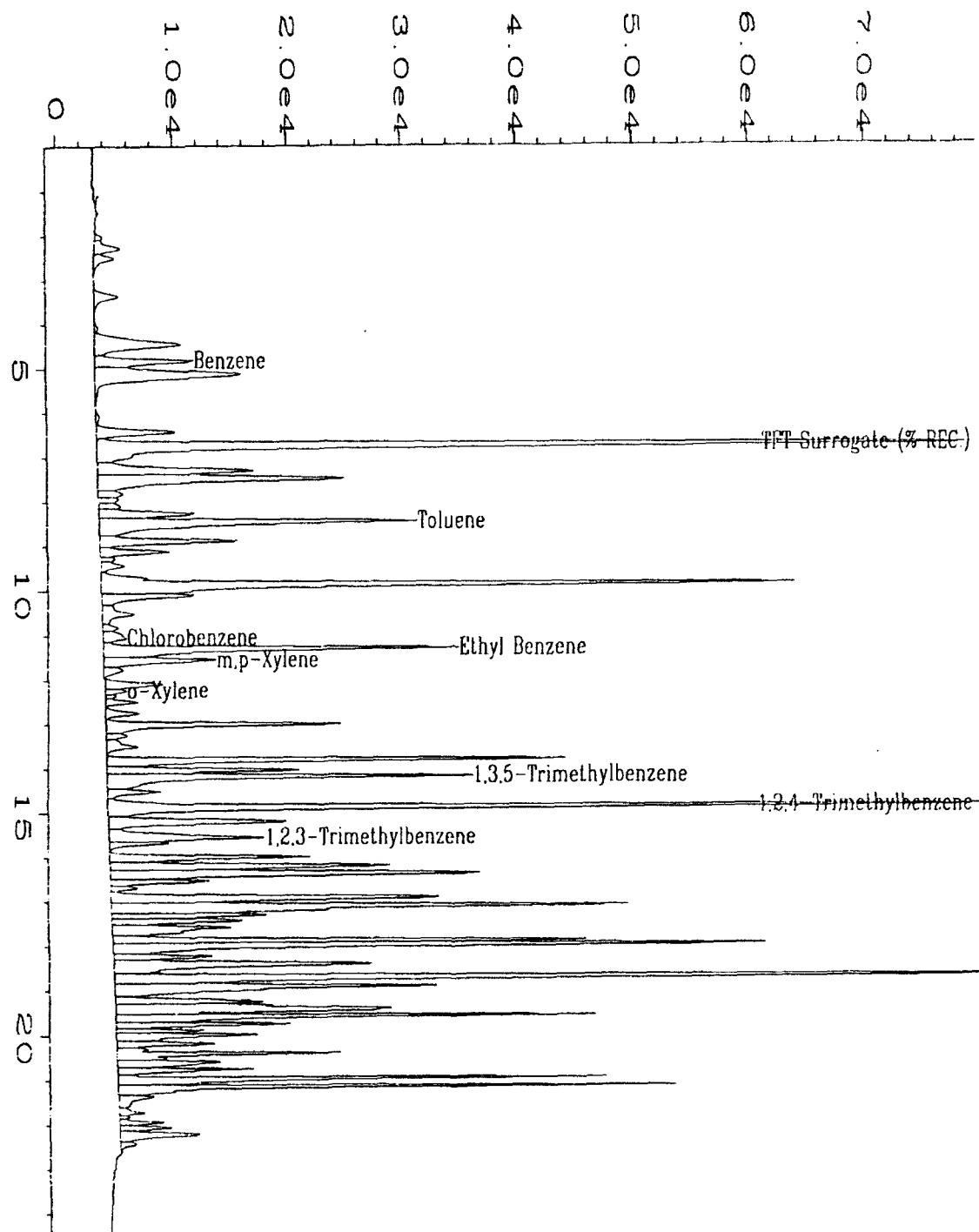
NA = Not Available/Not Applicable.

K. Cone

Analyst

P. McClellan

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20403\026R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 26
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04752;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	TH
Acquired on	: 03 Apr 95 08:58 PM	Analysis Method	: BX20403 TH
Report Created on:	10 Apr 95 04:45 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 04:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-0954 CLIENT#: 24MP-2S WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-4S	Client Project No.	: 722450.21020
Lab Sample Number	: X04757	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/4/95	Matrix	: Water
Date Analyzed	: 4/4/95	Lab File No.	: BX2040417
		Method Blank No.	: MB040495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	9.3	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 71% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

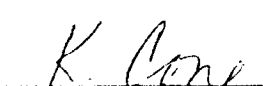
B = Compound also found in the blank.

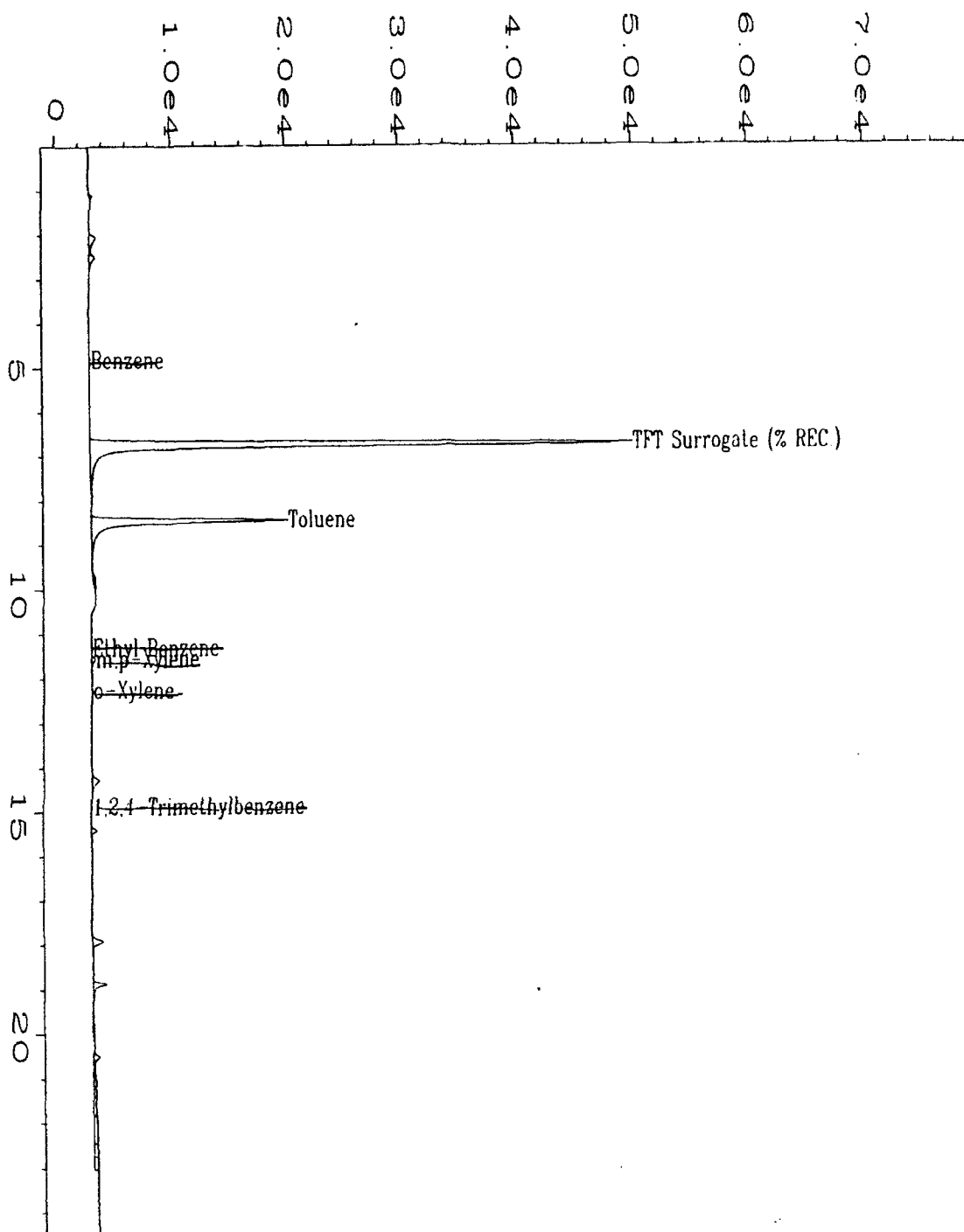
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

VA = Not Available/Not Applicable.


Analyst


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Data File Name : E:\2\DATA\BX20404\017R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04757;1;5
 Run Time Bar Code:
 Acquired on : 04 Apr 95 12:09 PM
 Report Created on: 26 Apr 95 05:57 PM
 Last Recalib on : 14 APR 95 02:10 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 17
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX2040 MT
 Analysis Method : BX2040 MT
 Sample Amount : 0
 ISTD Amount :

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24MP-4S

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-5D ^J	Client Project No.	: 722450.21020
Lab Sample Number	: X04762	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/5/95	Lab File No.	: BX2040518
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.8	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	0.8	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	93%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

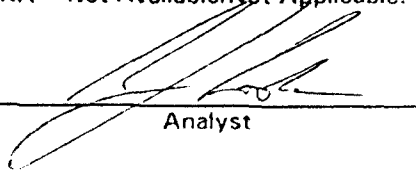
U = Compound analyzed for, but not detected.

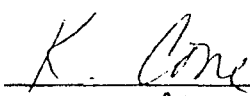
B = Compound also found in the blank.

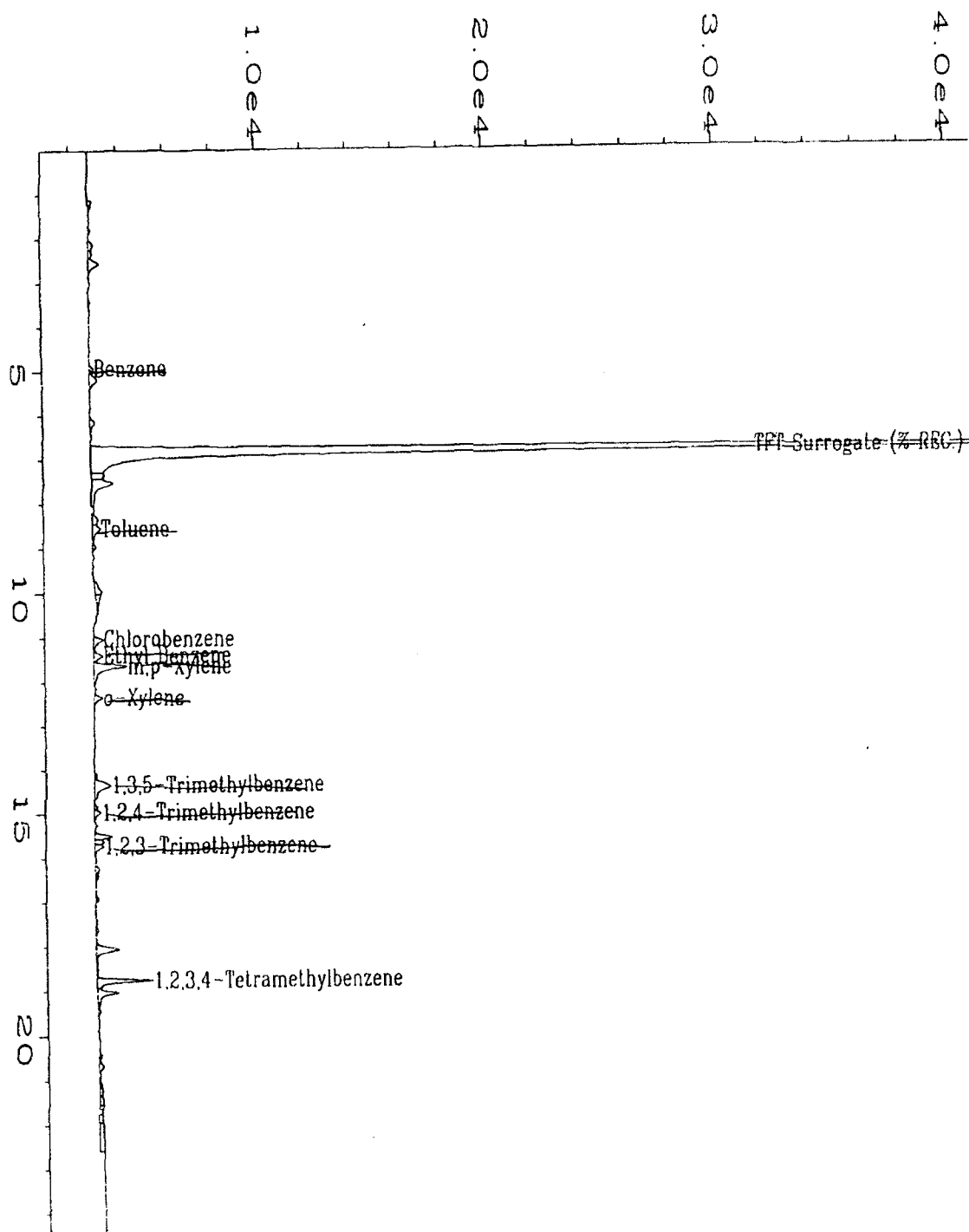
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20405\018R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04762;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20405 11T
Acquired on	: 05 Apr 95 11:13 PM	Analysis Method	: BX20405 11T
Report Created on:	06 Apr 95 08:36 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0954 Client#: 24MP-5D Water		

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: 24SS-2	Client Project No.	: 722450.21020
Lab Sample Number	: X04770	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 8020
Date Extracted/Prepared	: 4/6/95	Matrix	: Soil
Date Analyzed	: 4/6/95	Lab File No.	: BX2040611
		Method Blank No.	: MB040695

Compound Name	Cas Number	Sample Concentration ug/Kg	RL ug/Kg
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Chlorobenzene	108-90-7	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	1.0 J	4.0
1,3,5-Trimethylbenzene	108-67-8	2.0 J	4.0
1,2,4-Trimethylbenzene	95-63-6	U	4.0
1,2,3-Trimethylbenzene	526-73-8	U	4.0
1,2,3,4-Tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	66%	50%-150% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

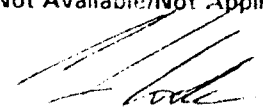
U = Compound analyzed for, but not detected.

B = Compound also found in the blank.


J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

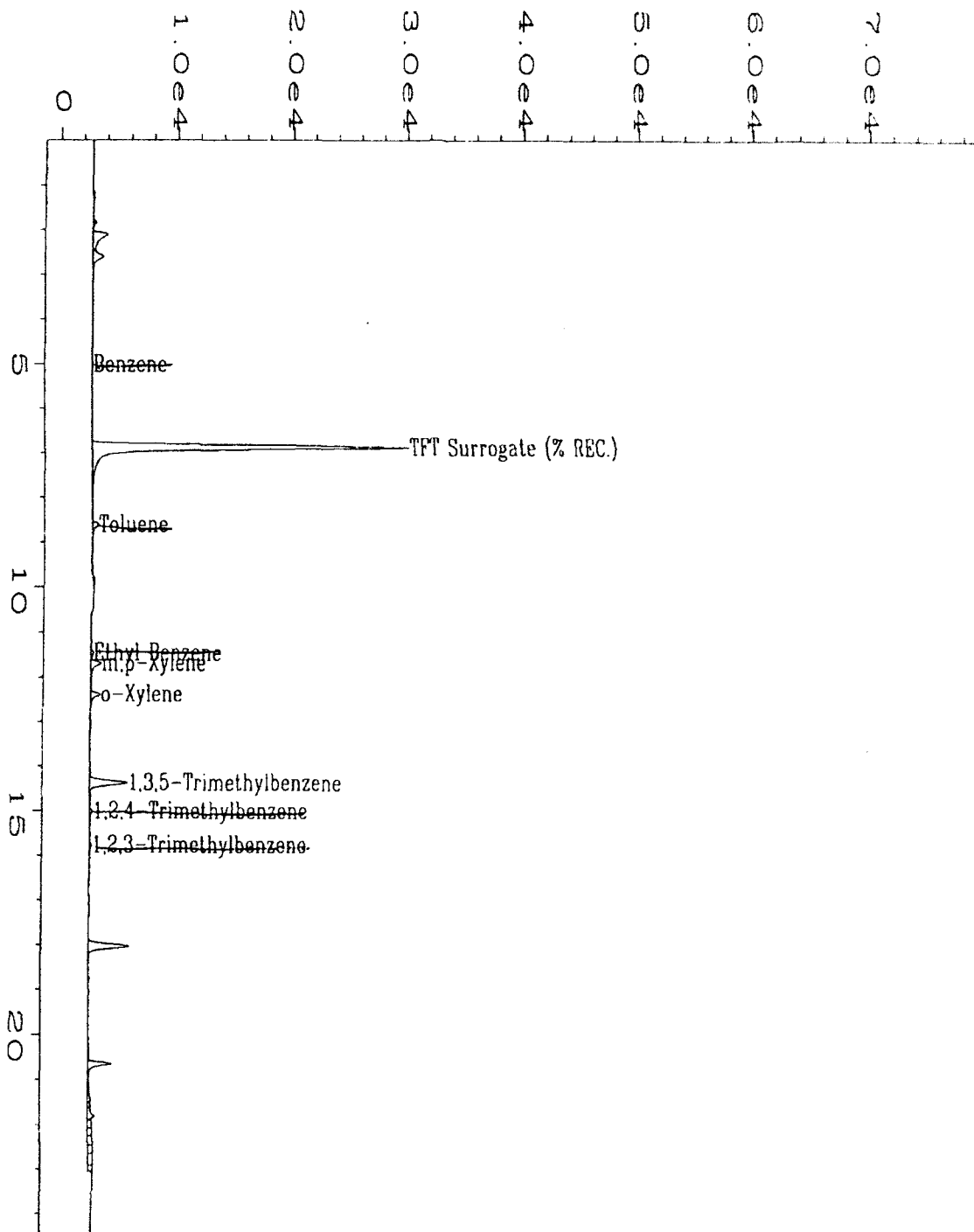
NA = Not Available/Not Applicable.



Analyst



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Data File Name : C:\HPCHEM\2\DATA\BX20406\011R0801.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04770;1;5
 Run Time Bar Code :
 Acquired on : 06 Apr 95 04:18 PM
 Report Created on : 07 Apr 95 07:48 AM
 Last Recalib on : 07 APR 95 07:38 AM
 Multiplier : 1
 Sample Info : Project#: 95-0954 Client#: 24SS-2 SOIL

Page Number : 1
 Vial Number : 11
 Injection Number : 1
 Sequence Line : 8
 Instrument Method: BX20406
 Analysis Method : BX20406
 Sample Amount : 0
 ISTD Amount :

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-1	Client Project No.	: 722450.21020
Lab Sample Number	: X04761DUP	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/5/95	Lab File No.	: BX2040515
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	1.9	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	1.0	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	95%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

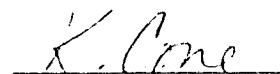
B = Compound also found in the blank.

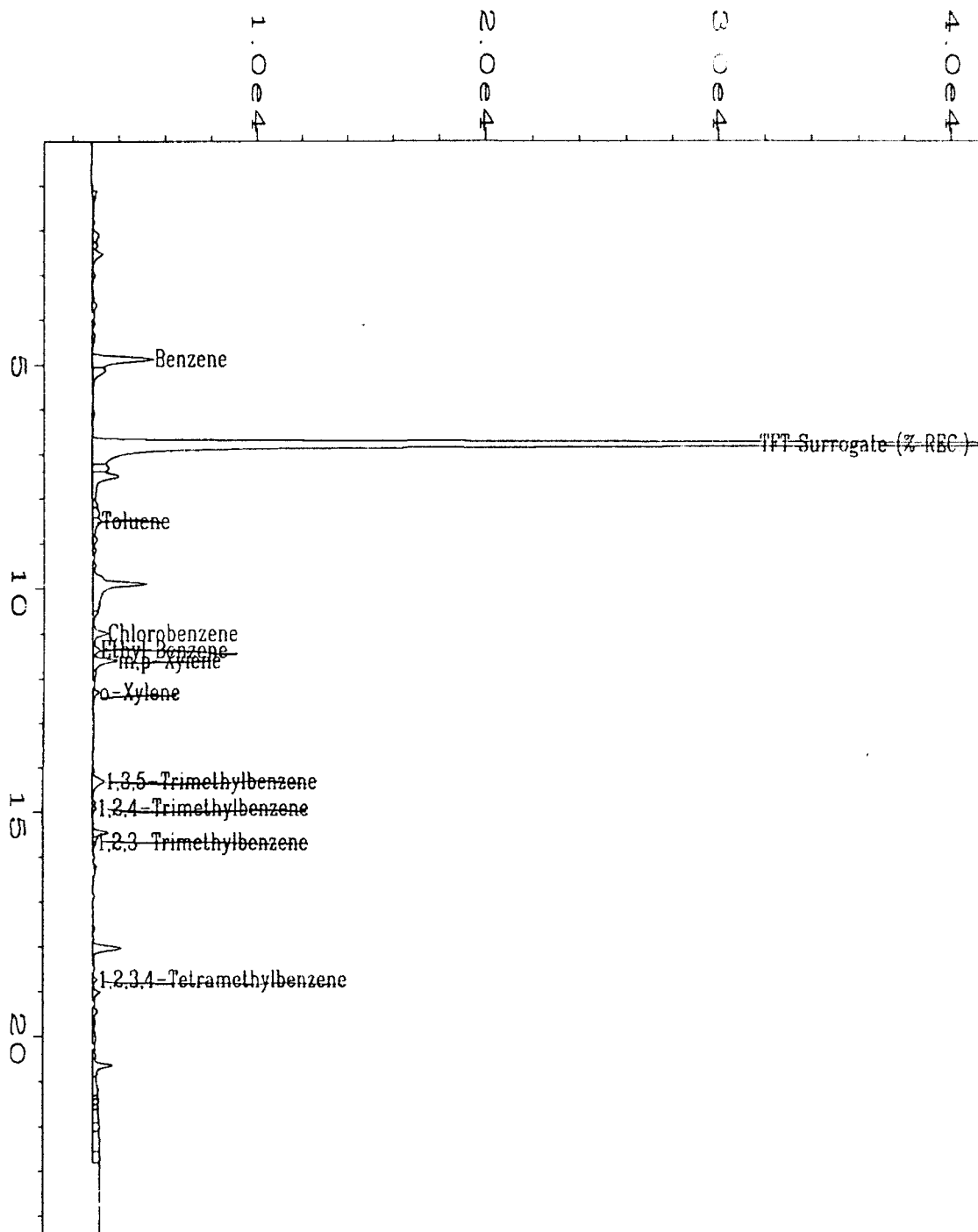
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20405\015R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04761DUP;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20405 MTI
Acquired on	: 05 Apr 95 08:57 PM	Analysis Method	: BX2040. TI
Report Created on:	06 Apr 95 08:34 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0954 Client#: MD24-1 Water		

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-1 J	Client Project No.	: 722450.21020
Lab Sample Number	: X04761	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/5/95	Lab File No.	: BX2040514
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	1.8	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	1.0	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	88%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

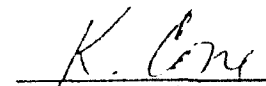
B = Compound also found in the blank.

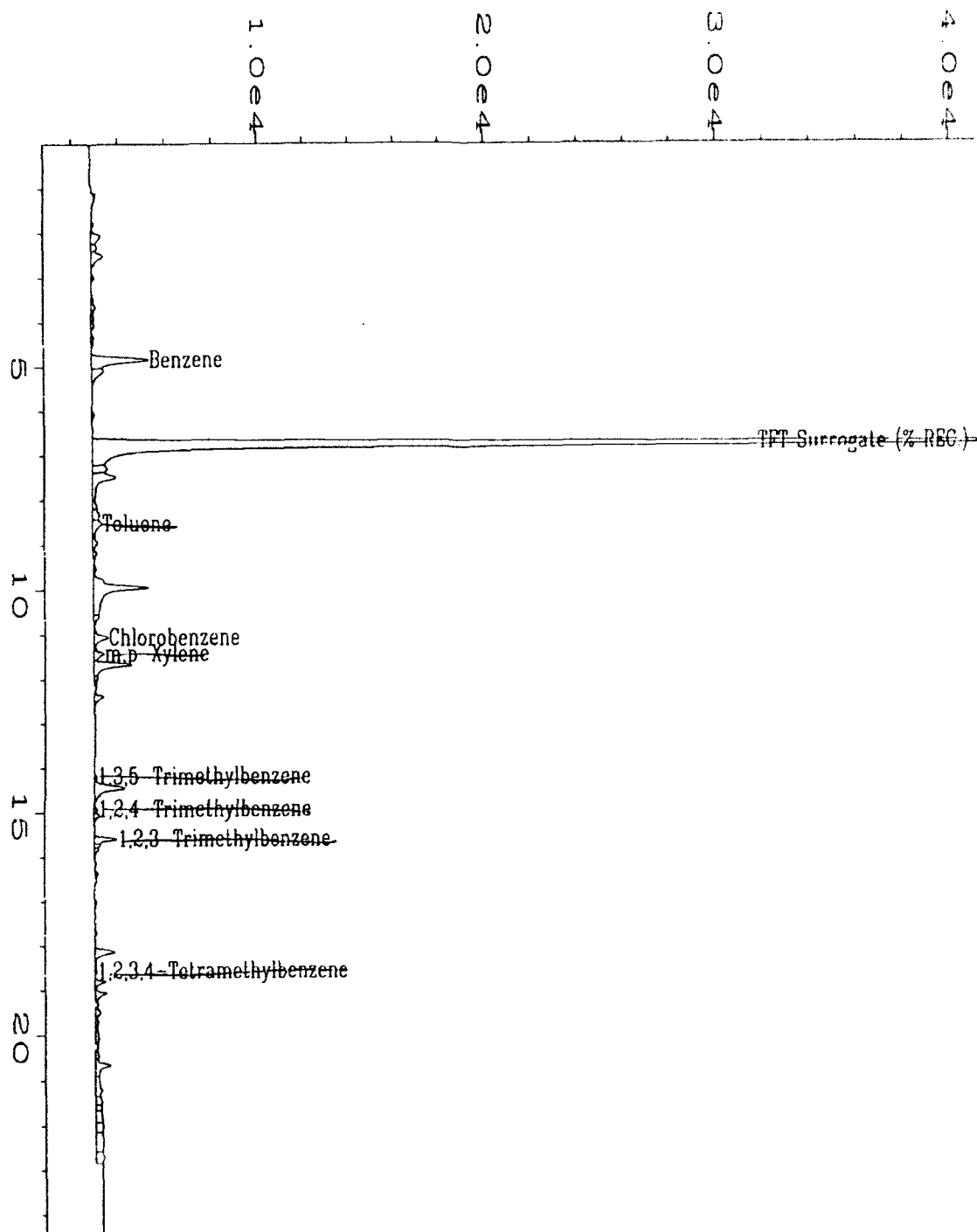
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20405\014R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04761;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20405
Acquired on	: 05 Apr 95 08:11 PM	Analysis Method	: BX20405
Report Created on:	: 05 Apr 95 08:34 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0954 Client#: MD24-1 Water		

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-21	Client Project No.	: 722450.21020
Lab Sample Number	: X04755	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/3/95	Matrix	: Water
Date Analyzed	: 4/3/95	Lab File No.	: BX2040413
		Method Blank No.	: MB040495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	20	0.4
Toluene	108-88-3	0.9	0.4
Chlorobenzene	108-90-7	0.8 B	0.4
Ethyl Benzene	100-41-4	0.6	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.6	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	1.7	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		81%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

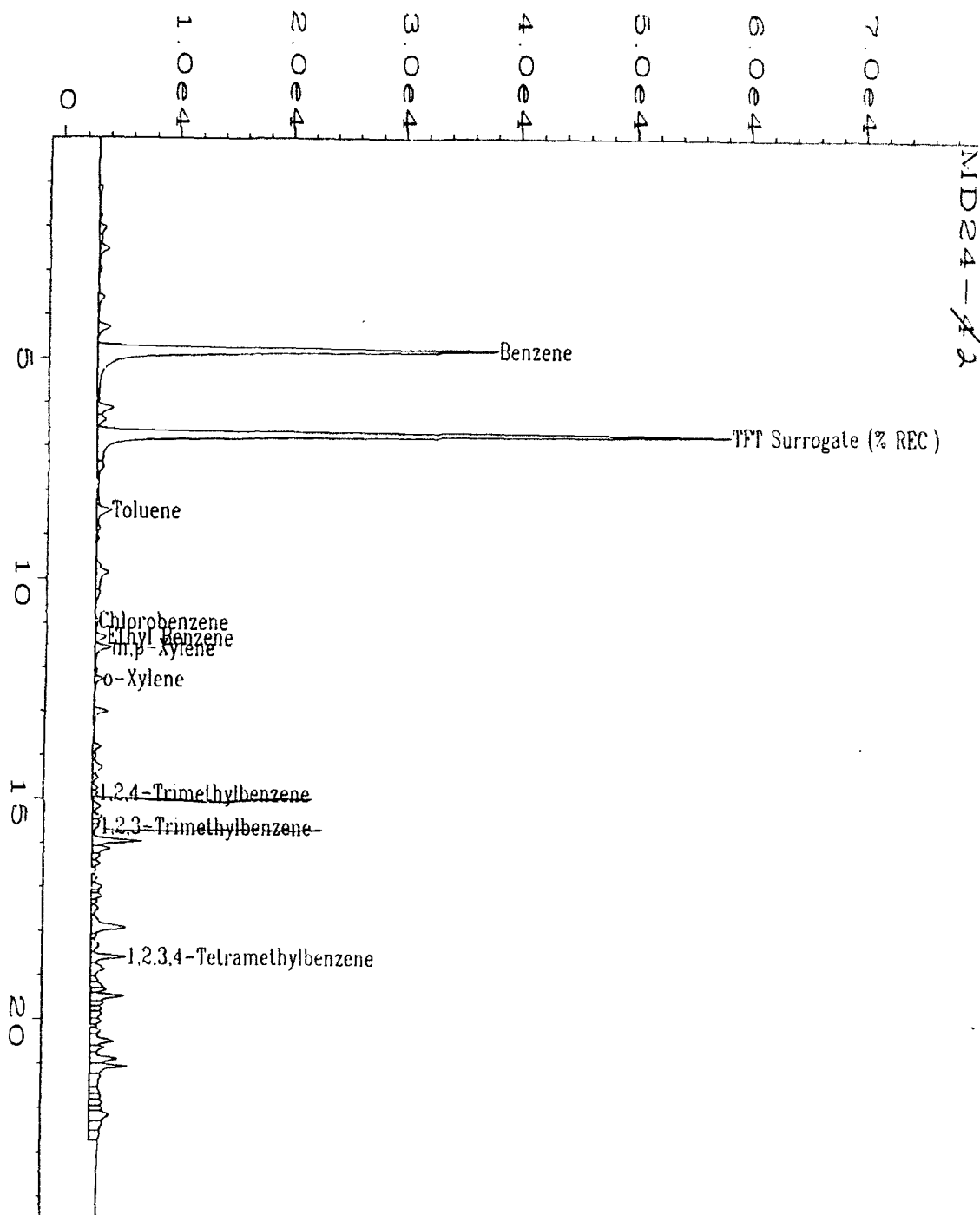
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K Bone
Analyst

AmcClle
Approved



Data File Name : E:\2\DATA\BX20404\013R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04755;1;5
 Run Time Bar Code:
 Acquired on : 04 Apr 95 09:04 AM
 Report Created on: 26 Apr 95 07:44 PM
 Last Recalib on : 14 APR 95 02:10 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 13
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20404.MT
 Analysis Method : BX2040.MT
 Sample Amount : 0
 ISTD Amount :

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MD24-2

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-3	Client Project No.	: 722450.21020
Lab Sample Number	: X04760	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/5/95	Lab File No.	: BX2040513
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.8	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 91% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

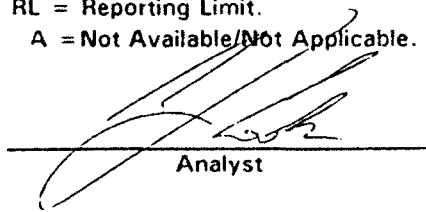
U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

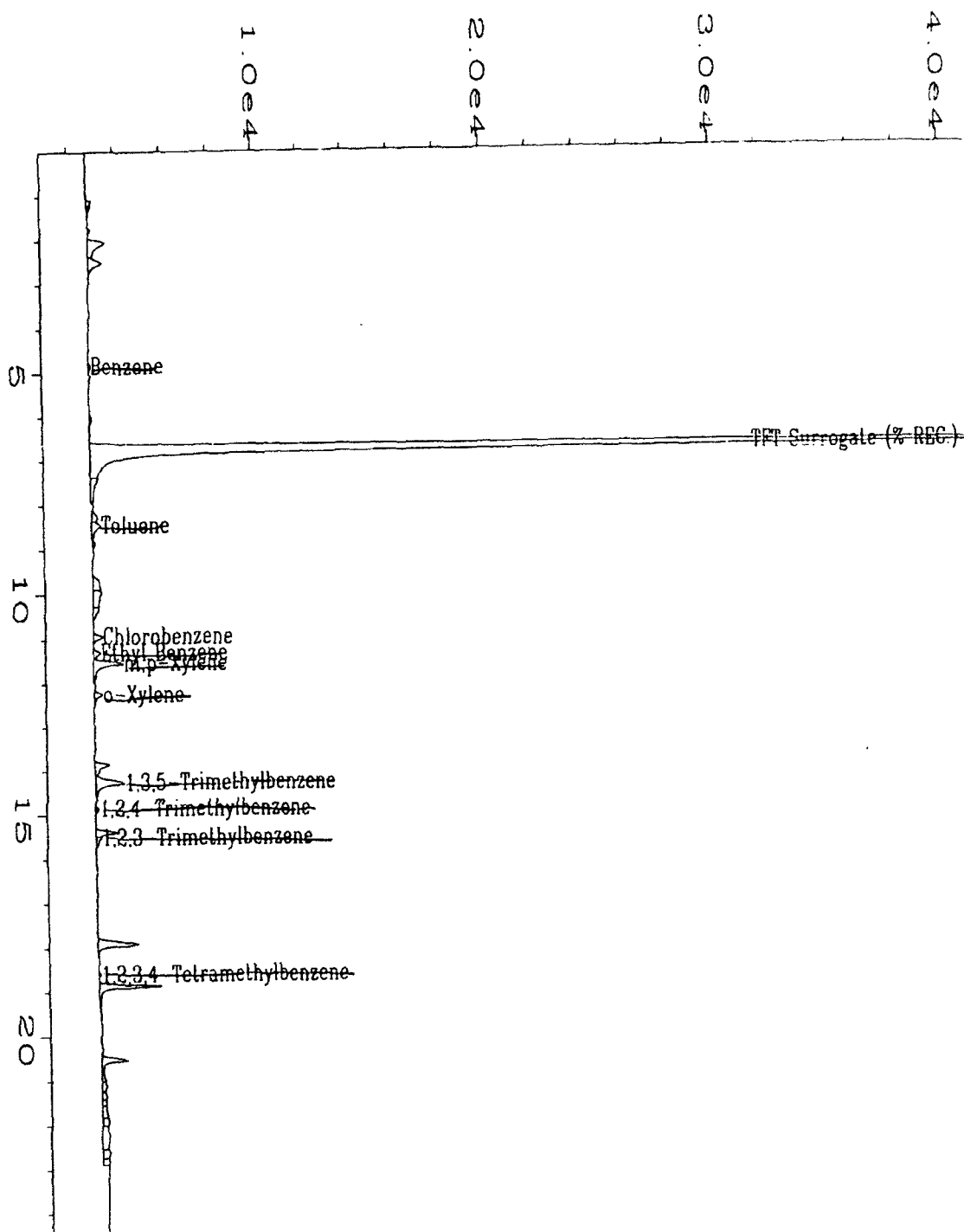
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

A = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20405\013R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04760;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX2040 ⁵ MT
Acquired on	: 05 Apr 95 07:26 PM	Analysis Method	: BX204C MT
Report Created on:	06 Apr 95 08:33 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0954 Client#: MD24-3	Water	

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-4 ^J	Client Project No.	: 722450.21020
Lab Sample Number	: X04758	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/4/95	Matrix	: Water
Date Analyzed	: 4/4/95	Lab File No.	: BX2040418
		Method Blank No.	: MB040495

Compound Name	Cas Number	Sample Concentration		RL
		ug/L		ug/L
Benzene	71-43-2	U		0.4
Toluene	108-88-3	U		0.4
Chlorobenzene	108-90-7	0.7	B	0.4
Ethyl Benzene	100-41-4	U		0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U		0.4
1,3,5-Trimethylbenzene	108-67-8	U		0.4
1,2,4-Trimethylbenzene	95-63-6	U		0.4
1,2,3-Trimethylbenzene	526-73-8	U		0.4
1,2,3,4-Tetramethylbenzene	488-23-3	0.8		0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	77%	70%-130% (QC limits)
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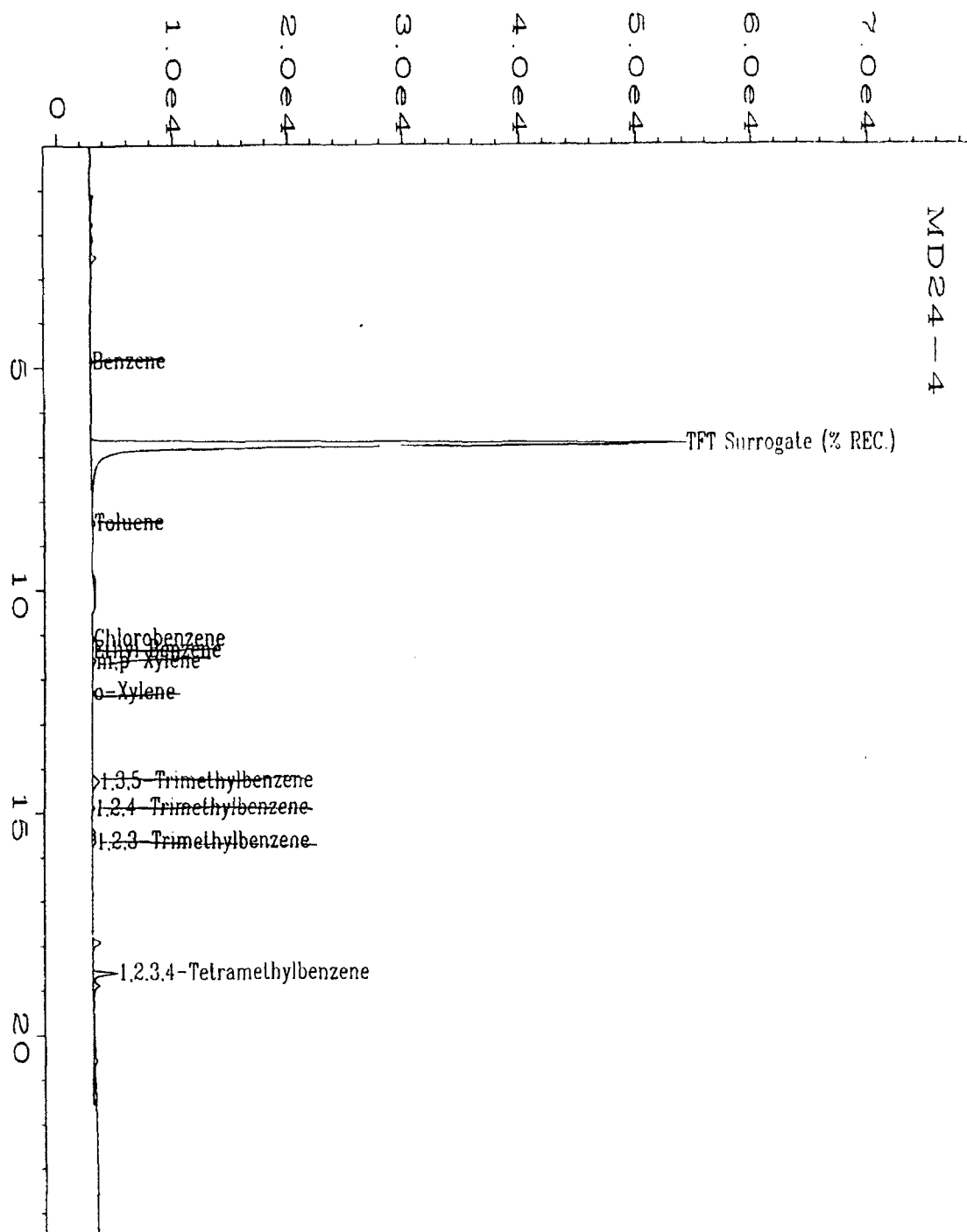
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : E:\2\DATA\BX20404\018R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04758;1;5
 Run Time Bar Code:
 Acquired on : 04 Apr 95 12:56 PM
 Report Created on: 26 Apr 95 07:28 PM
 Last Recalib on : 14 APR 95 02:10 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 18
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX2040 MT
 Analysis Method : BX2040 MT
 Sample Amount : 0
 ISTD Amount :

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-5	Client Project No.	: 722450.21020
Lab Sample Number	: X04756	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/4/95	Matrix	: Water
Date Analyzed	: 4/4/95	Lab File No.	: BX2040416
		Method Blank No.	: MB040495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	0.5	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 90% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

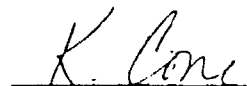
B = Compound also found in the blank.

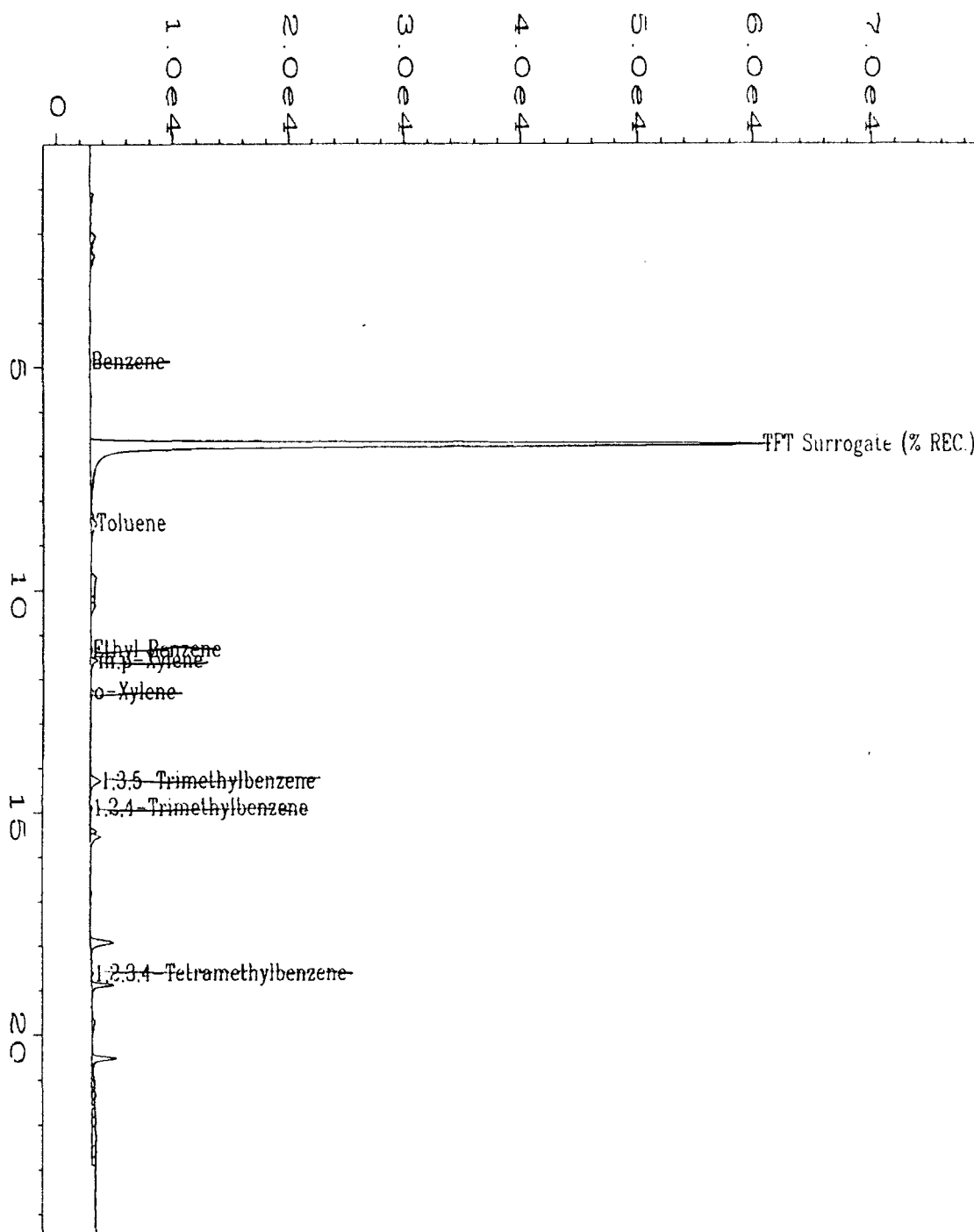
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

IA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : E:\2\DATA\BX20404\016R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04756;1;5
 Run Time Bar Code:
 Acquired on : 04 Apr 95 11:23 AM
 Report Created on: 26 Apr 95 05:56 PM
 Last Recalib on : 14 APR 95 02:10 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 16
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX2040 MT
 Analysis Method : BX2040 4T
 Sample Amount : 0
 ISTD Amount :

pm 4/27/95

MD24-5

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-8 /	Client Project No.	: 722450.21020
Lab Sample Number	: X04750	Lab Project No.	: 95-0954
Date Sampled	: 3/22/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/3/95	Matrix	: Water
Date Analyzed	: 4/3/95	Lab File No.	: BX2040320
		Method Blank No.	: MB040395

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 97% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

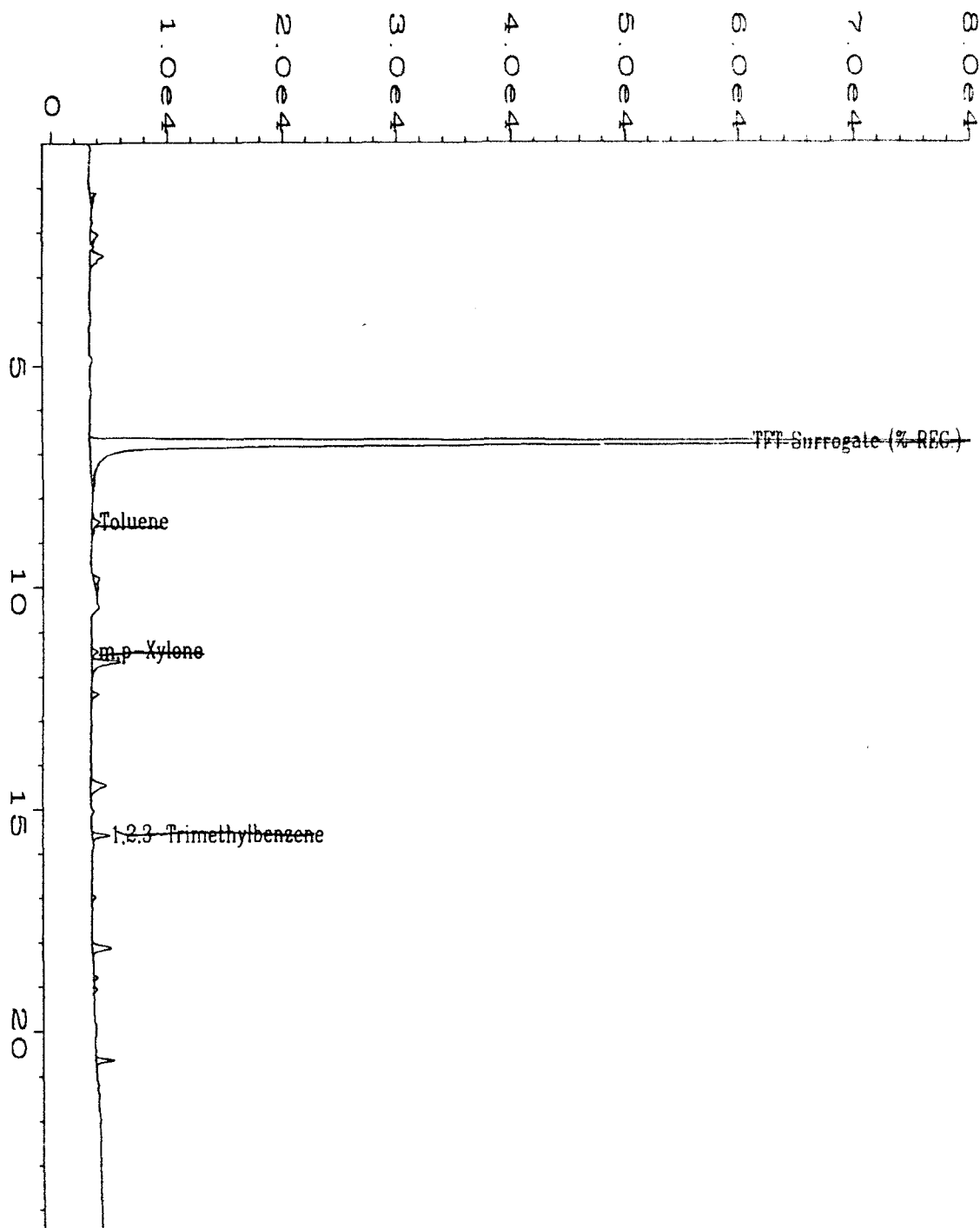
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20403\020R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04750;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	TX20403 TH
Acquired on	: 03 Apr 95 04:27 PM	Analysis Method	: BX2040 TH
Report Created on:	10 Apr 95 04:42 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 04:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-0954 CLIENT#: MD24-8 WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-41	Client Project No.	: 722450.21020
Lab Sample Number	: X04759	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/5/95	Lab File No.	: BX2040512
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.6	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 96% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

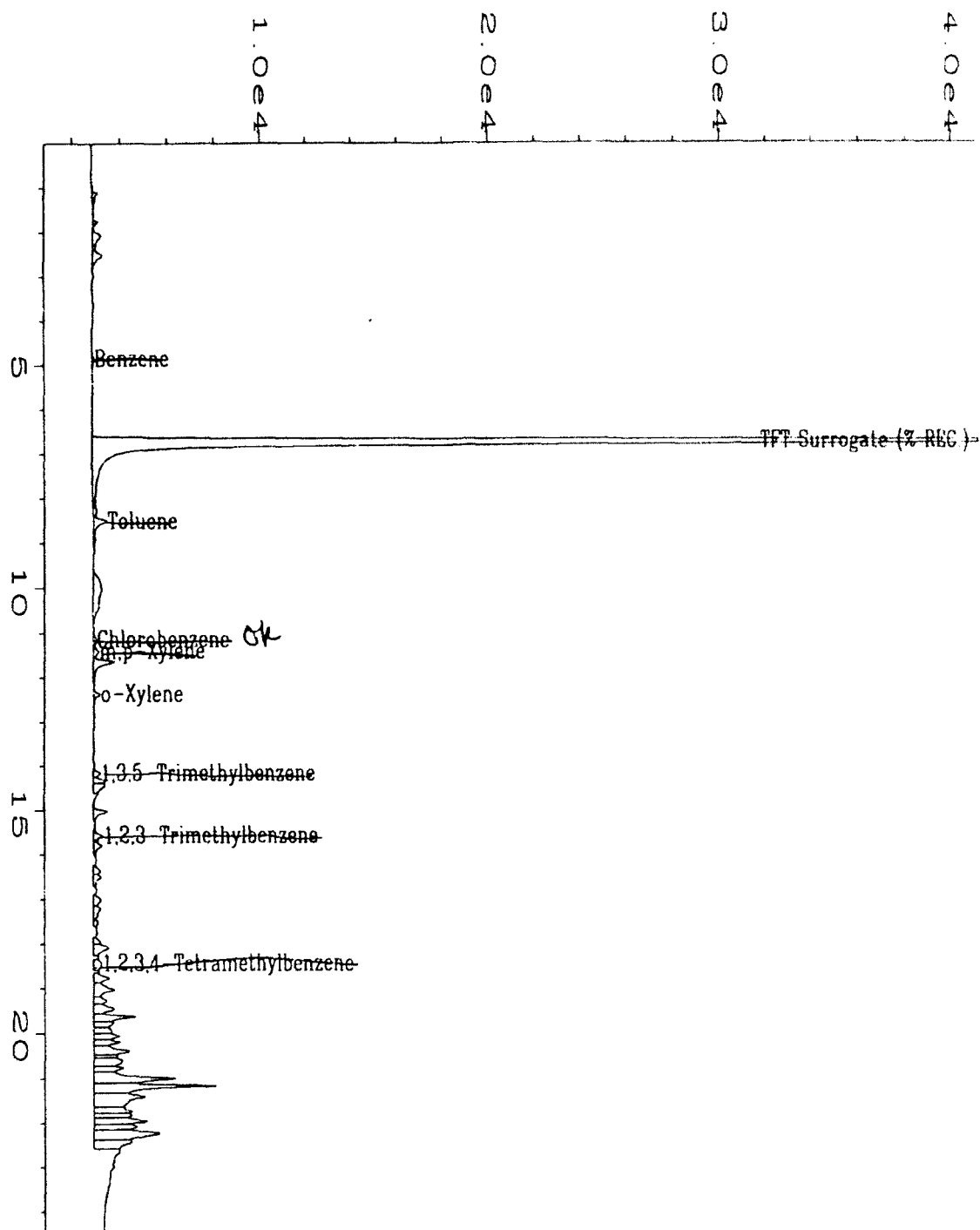
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

Am'Clle
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20405\012R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04759;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX2040 MT
Acquired on	: 05 Apr 95 06:40 PM	Analysis Method	: BX2040 .T
Report Created on:	06 Apr 95 08:32 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0954 Client#: MD24-41 Water		

pm 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-1S	Client Project No.	: 722450.21020
Lab Sample Number	: X04754	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/4/95	Matrix	: Water
Date Analyzed	: 4/4/95	Lab File No.	: BX2040411
		Method Blank No.	: MB040495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	*	*
Toluene	108-88-3	*	*
Chlorobenzene	108-90-7	1.1 B	0.4
Ethyl Benzene	100-41-4	*	*
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	*	*
1,3,5-Trimethylbenzene	108-67-8	*	*
1,2,4-Trimethylbenzene	95-63-6	*	*
1,2,3-Trimethylbenzene	526-73-8	*	*
1,2,3,4-Tetramethylbenzene	488-23-3	73	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 98% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = See BX2040511 for noted values, df = 100, 04/05/95.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

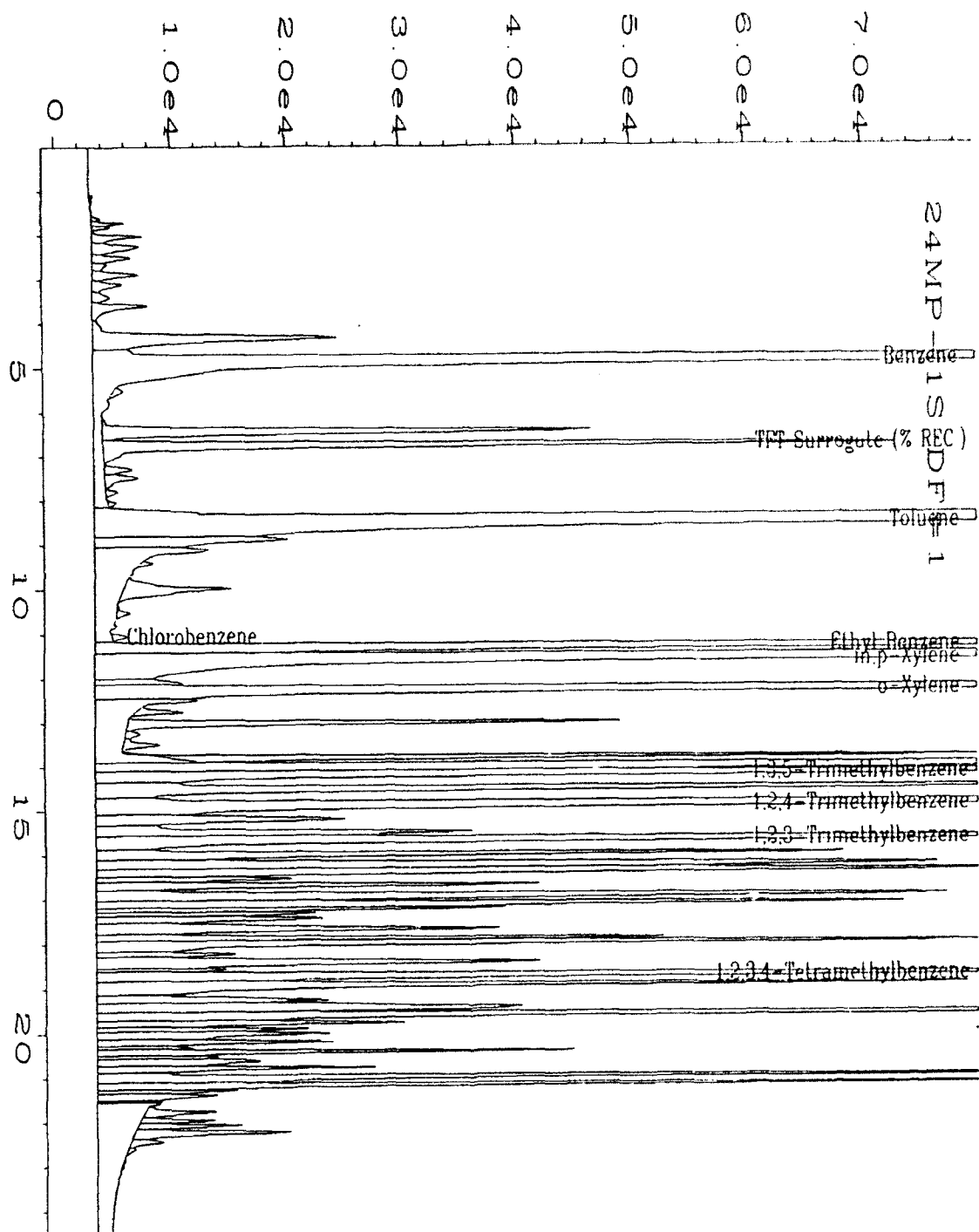
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

AmChella
Approved



Data File Name : E:\2\DATA\BX20404\011R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04754;1;5
 Run Time Bar Code:
 Acquired on : 04 Apr 95 07:33 AM
 Report Created on: 26 Apr 95 07:29 PM
 Last Recalib on : 14 APR 95 02:10 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 11
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX2040 MT
 Analysis Method : BX2040 IT
 Sample Amount : 0
 ISTD Amount :

24MP-15

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-1S	Client Project No.	: 722450.21020
Lab Sample Number	: X04754	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	Dilution Factor	: 100.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/5/95	Lab File No.	: BX2040511
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	220	40.0
Toluene	108-88-3	1800	40.0
Chlorobenzene	108-90-7	62	40.0
Ethyl Benzene	100-41-4	130	40.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	690	40.0
1,3,5-Trimethylbenzene	108-67-8	65	40.0
1,2,4-Trimethylbenzene	95-63-6	U	40.0
1,2,3-Trimethylbenzene	526-73-8	U	40.0
1,2,3,4-Tetramethylbenzene	488-23-3	U	40.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 100% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

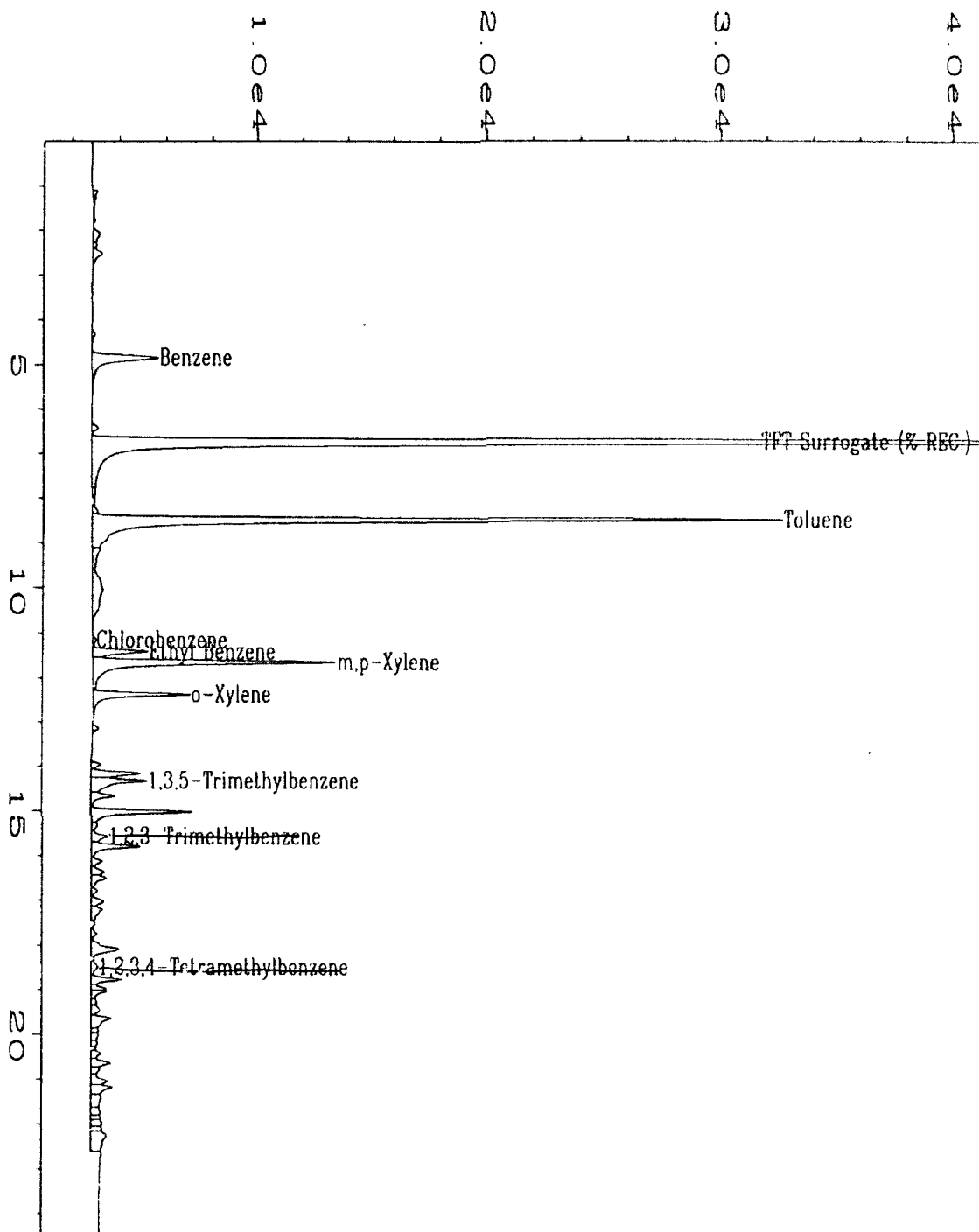
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : C:\HPCHEM\2\DATA\BX20405\011R0901.D
 Operator : SW Tyson Page Number : 1
 Instrument : BTEX2 Vial Number : 11
 Sample Name : X04754;100;0.050 Injection Number : 1
 Run Time Bar Code: Sequence Line : 9
 Acquired on : 05 Apr 95 05:53 PM Instrument Method: BX20405 TH
 Report Created on: 06 Apr 95 08:32 AM Analysis Method : BX20405 TH
 Last Recalib on : 06 APR 95 08:23 AM Sample Amount : 0
 Multiplier : 100 ISTD Amount :
 Sample Info : Project#: 95-0954 Client#: 24MP-1S Water

pm 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-1D	Client Project No.	: 722450.21020
Lab Sample Number	: X04753	Lab Project No.	: 95-0954
Date Sampled	: 3/22/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/3/95	Matrix	: Water
Date Analyzed	: 4/3/95	Lab File No.	: BX2040327
		Method Blank No.	: MB040395

Compound Name	Cas Number	Sample	RL
		Concentration ug/L	
Benzene	71-43-2	15	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	1.0	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.5	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	80%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

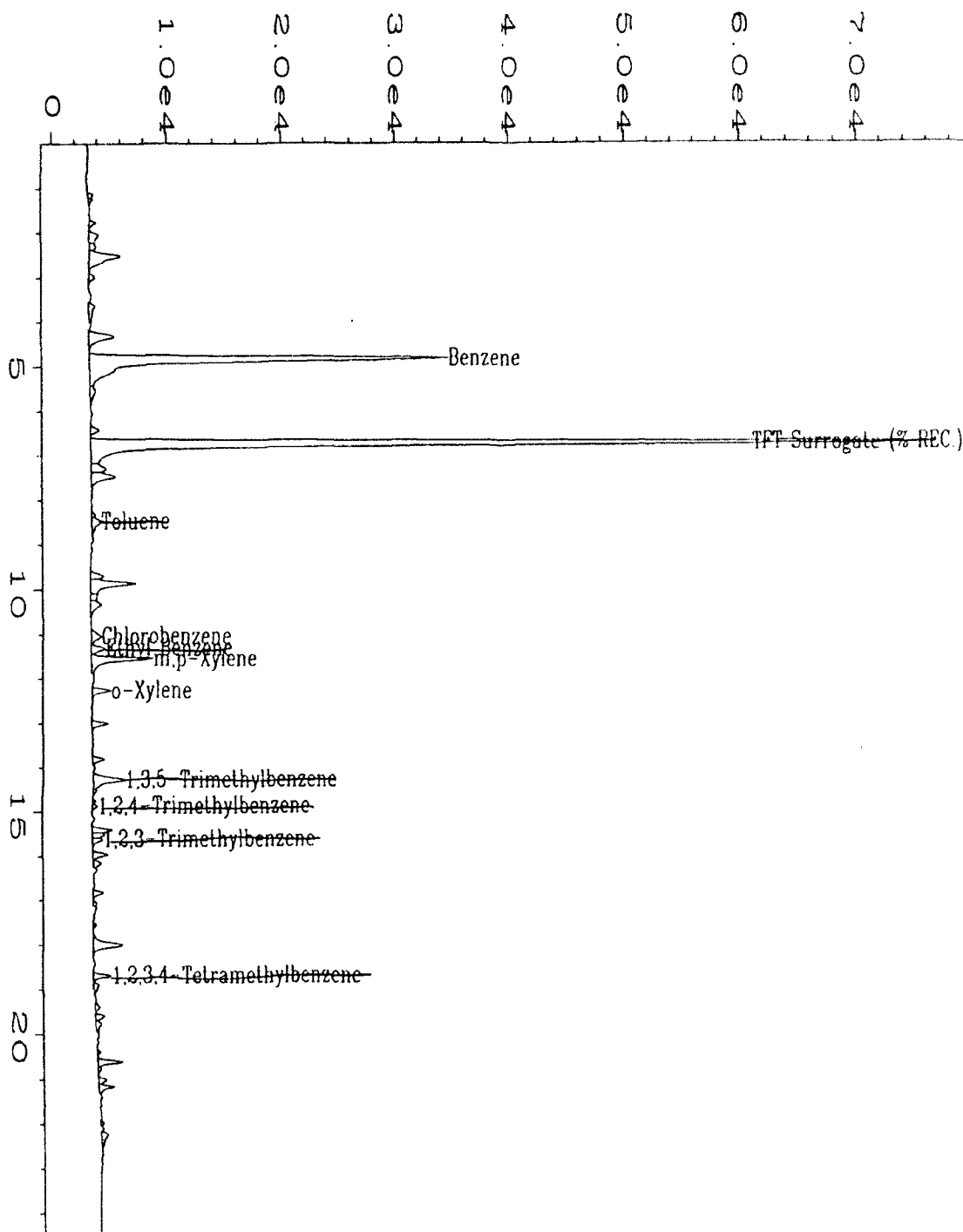
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Coni
Analyst

AmCelle
Approved



Data File Name : E:\2\DATA\BX20403\027R0101.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04753;1;5
 Run Time Bar Code:
 Acquired on : 03 Apr 95 09:43 PM
 Report Created on: 10 Apr 95 05:27 PM
 Last Recalib on : 10 APR 95 04:19 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 27
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: BX2040
 Analysis Method : BX2040
 Sample Amount : 0
 ISTD Amount :

pm 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-2D	Client Project No.	: 722450.21020
Lab Sample Number	: X04751	Lab Project No.	: 95-0954
Date Sampled	: 3/22/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/3/95	Matrix	: Water
Date Analyzed	: 4/3/95	Lab File No.	: BX2040321
		Method Blank No.	: MB040395

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	0.4	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.9	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-5	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 90% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

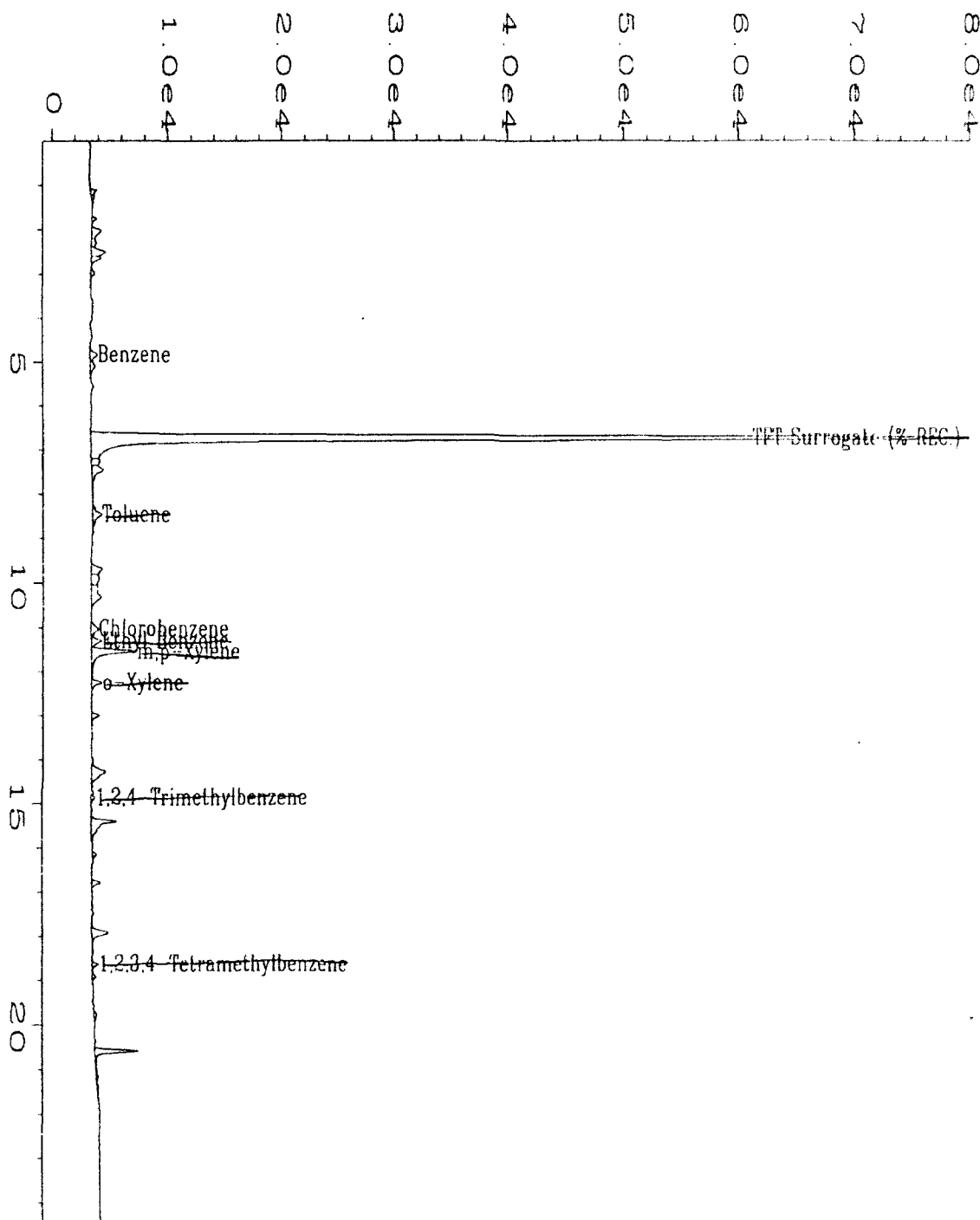
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20403\021R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 21
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04751;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX2040
Acquired on	: 03 Apr 95 05:11 PM	Analysis Method	: BX2040
Report Created on:	10 Apr 95 04:42 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 04:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-0954 CLIENT#: 24MP-2D WATER		

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24MP-2D	Client Project No.	: 722450.21020
Lab Sample Number	: X04751DUP	Lab Project No.	: 95-0954
Date Sampled	: 3/22/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/3/95	Matrix	: Water
Date Analyzed	: 4/3/95	Lab File No.	: BX2040322
		Method Blank No.	: MB040395

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.9	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 94% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

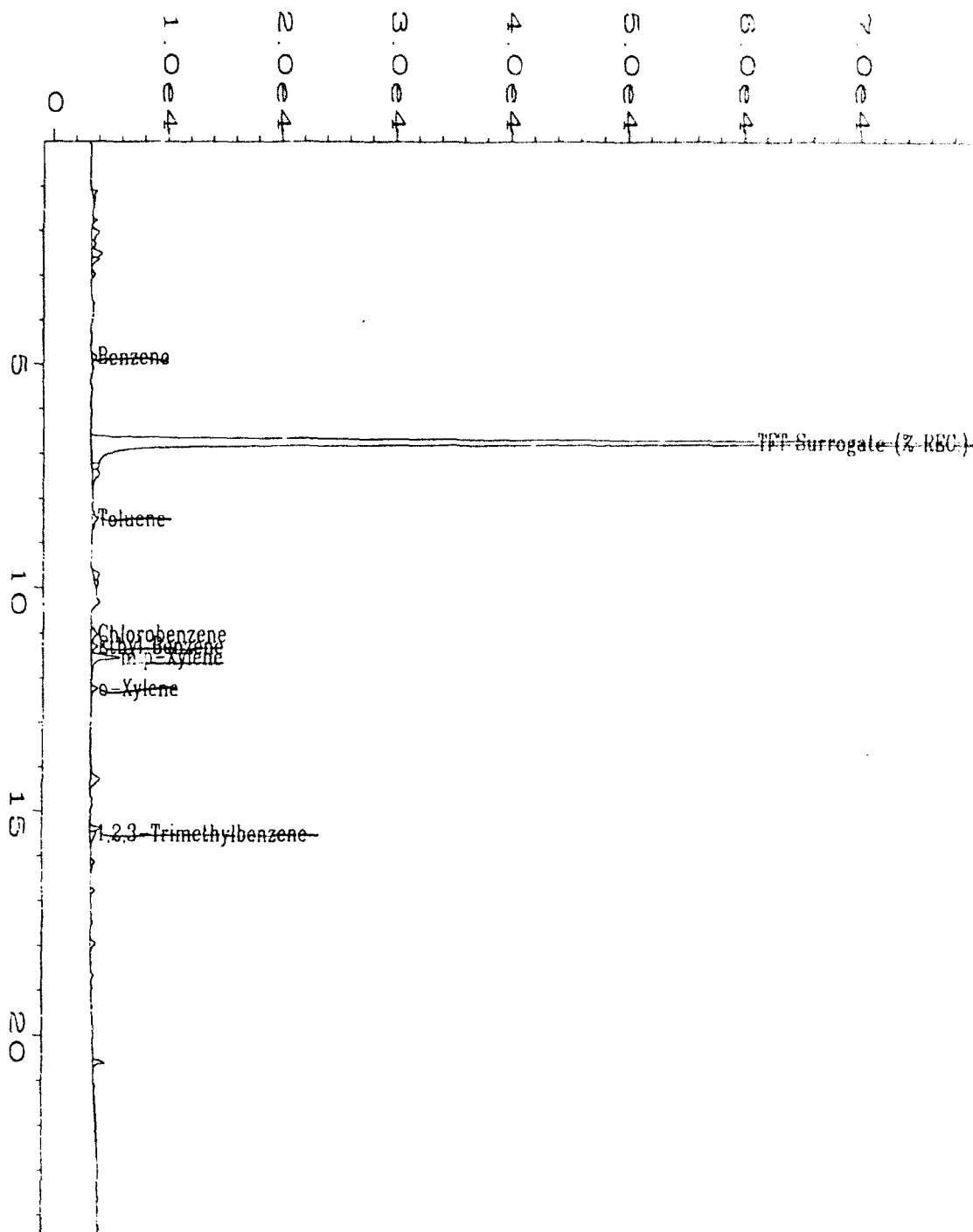
NA = Not Available/Not Applicable.

K. Cone

Analyst

Am. Chella

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20403\022R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 22
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04751DUP;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX2040~ MT
Acquired on	: 03 Apr 95 05:56 PM	Analysis Method	: BX2040 MT
Report Created on:	10 Apr 95 04:43 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 04:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-0954 CLIENT#: 24MP-2D WATER		

pm 4/27/95

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24MP-1D	Client Project No.	: 722450.21020/MAC
Lab Sample No.	: X04753	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	EPA Method No.	: 5030/8015 Mod.
Date Received	: 3/24/95	Matrix	: Water
Date Prepared	: 4/3/95	Method Blank	: MB040395
Date Analyzed	: 4/3/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	1.00	0.00	0.91	91%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	1.00	0.95	95%	4	50	60-140

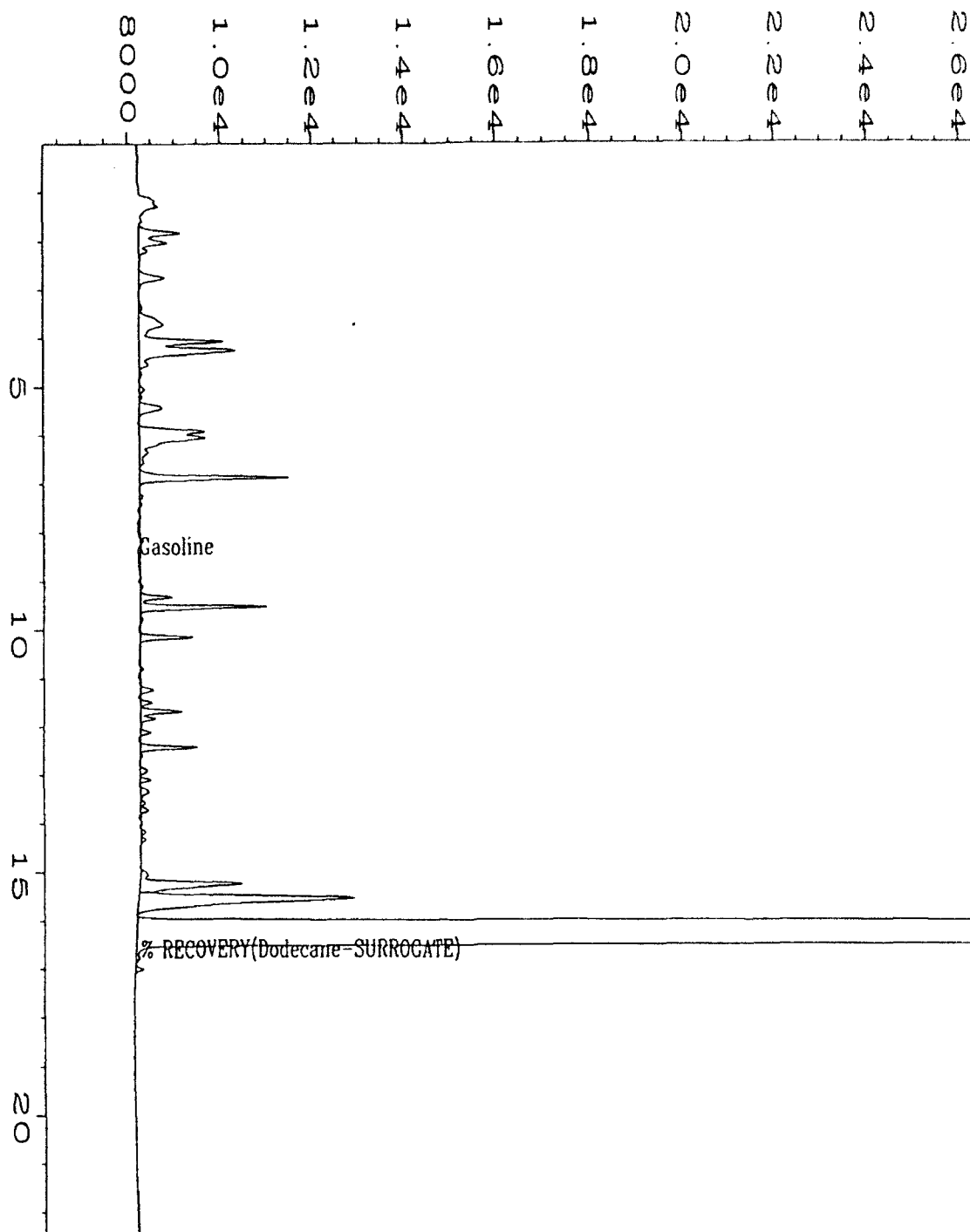
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

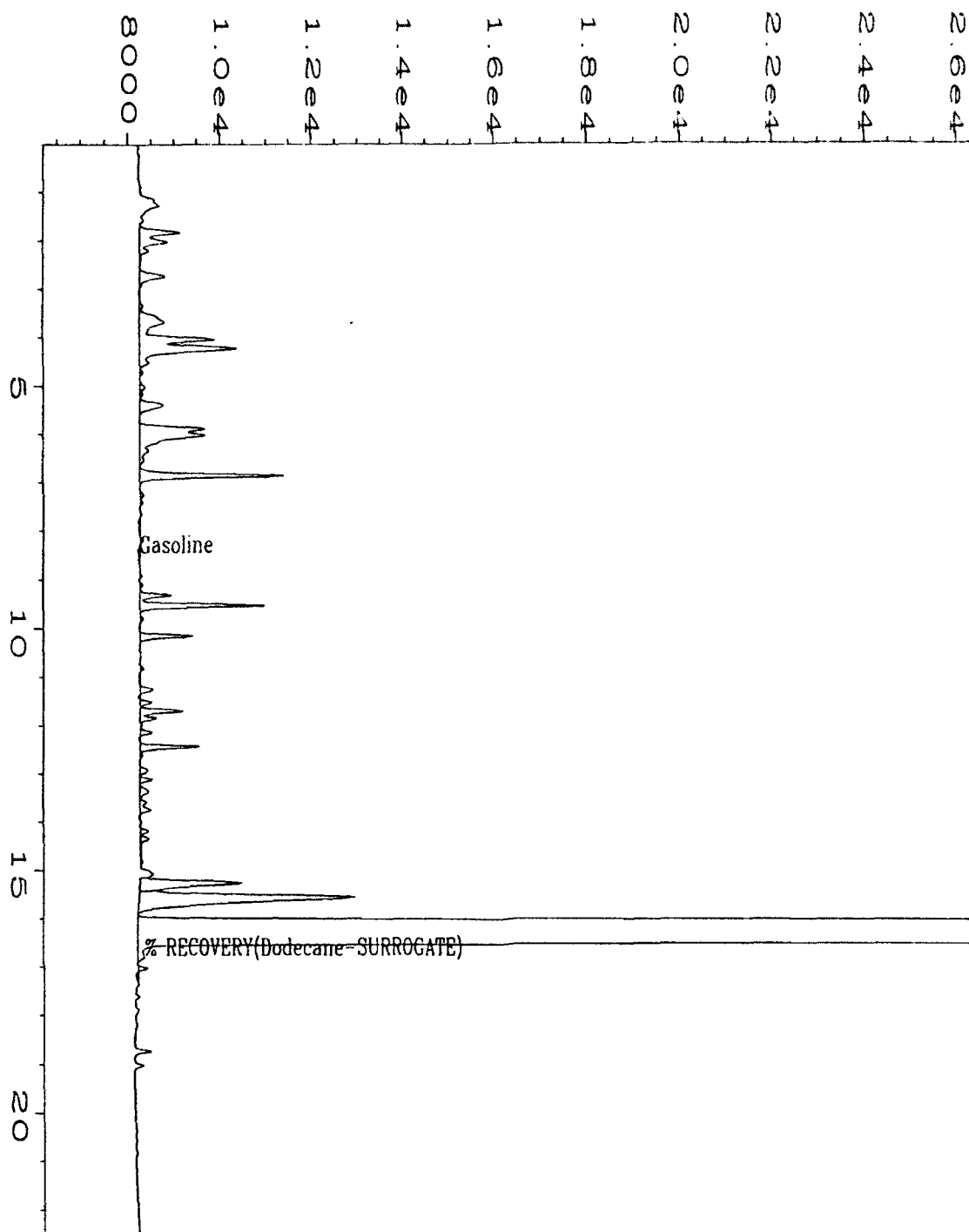
Spike Recovery: 0 out of (2) outside limits.

Comments: NA = Not analyzed/not applicable.

EW



Data File Name	: C:\HPCHEM\1\DATA\tvh0402\044F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 44
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04753 MS	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0401
Acquired on	: 03 Apr 95 05:27 PM	Analysis Method	: TVH0401
Report Created on:	03 Apr 95 05:50 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 1 PPM SPIKE		



Data File Name	: C:\HPCHEM\1\DATA\tvh0402\045F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 45
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04753 MSD	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402.MTH
Acquired on	: 03 Apr 95 06:01 PM	Analysis Method	: TVH0402.MTH
Report Created on	: 03 Apr 95 06:24 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 1 PPM SPIKE		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Water Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24MP-2D	Client Project No.	: 722450.21020
Lab Sample No.	: X04751		MacDill AFB
Date Sampled	: 3/22/95	Lab Project No.	: 95-0954
Date Received	: 3/24/95	EPA Method No.	: 602
Date Prepared	: 4/3/95	Matrix	: Water
Date Analyzed	: 4/3/95	Lab File Number(s)	: BX2040324,25
		Method Blank	: MB040395

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	40.0	0.4	32.7	81	65-121
Toluene	40.0	0.0	33.3	83	69-117
Ethyl Benzene	40.0	0.0	33.0	83	68-118
m,p-Xylene	80.0	0.0	72.0	90	66-116
o-Xylene	40.0	0.0	33.2	83	73-117
Chlorobenzene	40.0	0.0	32.9	82	65-121
1,3,5-TMB	40.0	0.0	36.0	90	65-121
1,2,4-TMB	40.0	0.0	32.8	82	65-121
1,2,3-TMB	40.0	0.0	33.9	85	65-121
1,2,3,4-TeMB	40.0	0.0	34.7	87	65-121

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Benzene	40.0	32.7	81	0.0	17.4	65-121
Toluene	40.0	33.1	83	0.6	15.8	69-117
Ethyl Benzene	40.0	33.1	83	0.3	11.9	68-118
m,p-Xylene	80.0	70.3	88	2.4	15.4	66-116
o-Xylene	40.0	32.8	82	1.2	13.2	73-117
Chlorobenzene	40.0	33.6	84	2.1	17.4	65-121
1,3,5-TMB	40.0	34.8	87	3.4	17.4	65-121
1,2,4-TMB	40.0	32.4	81	1.2	17.4	65-121
1,2,3-TMB	40.0	33.6	84	0.9	17.4	65-121
1,2,3,4-TeMB	40.0	33.8	85	2.6	17.4	65-121

* = Values outside of QC limits.

RPD: 0 out of (10) outside limits.

Spike Recovery: 0 out of (20) outside limits.

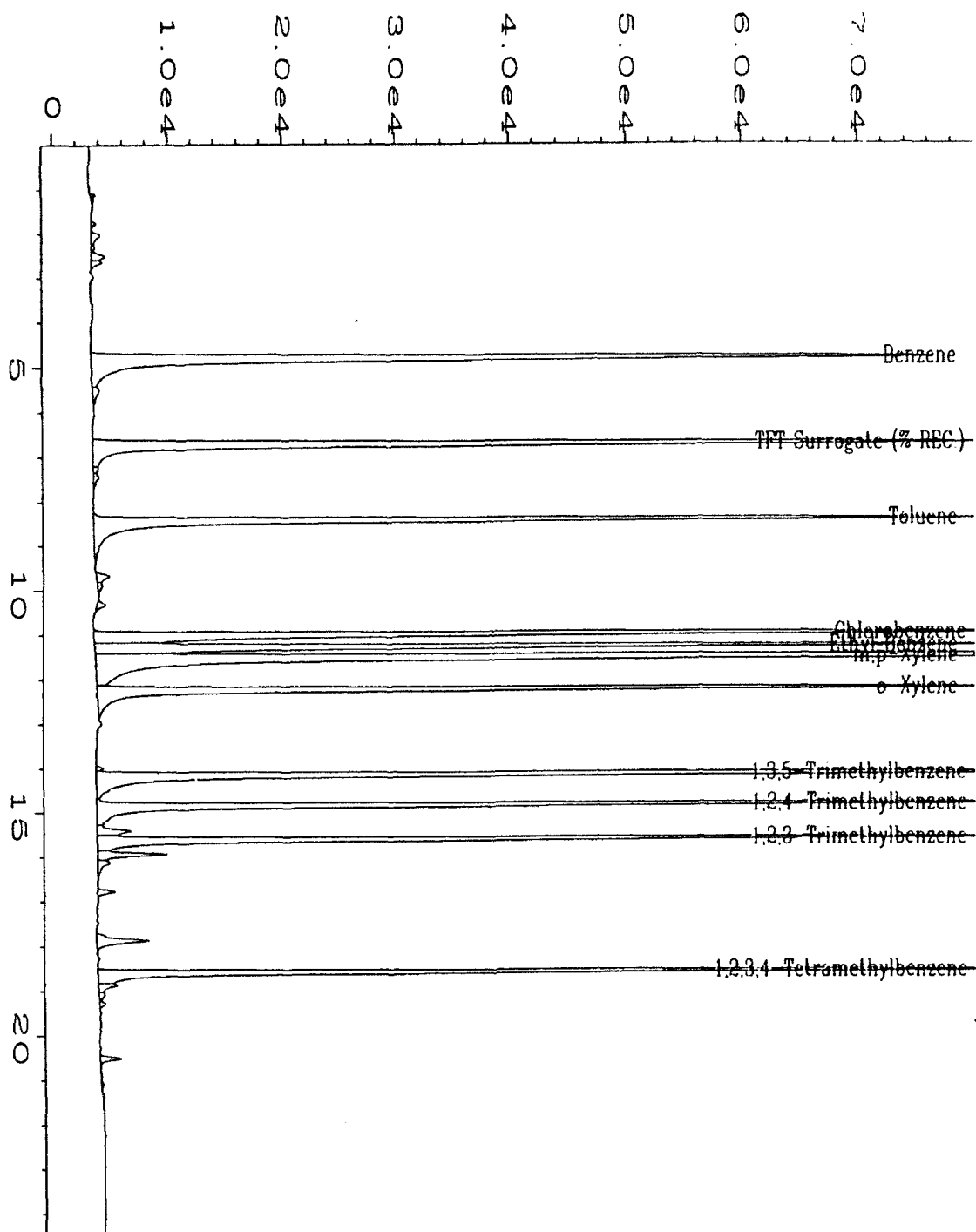
Comments:

KSC

Analyst

Am-Cella

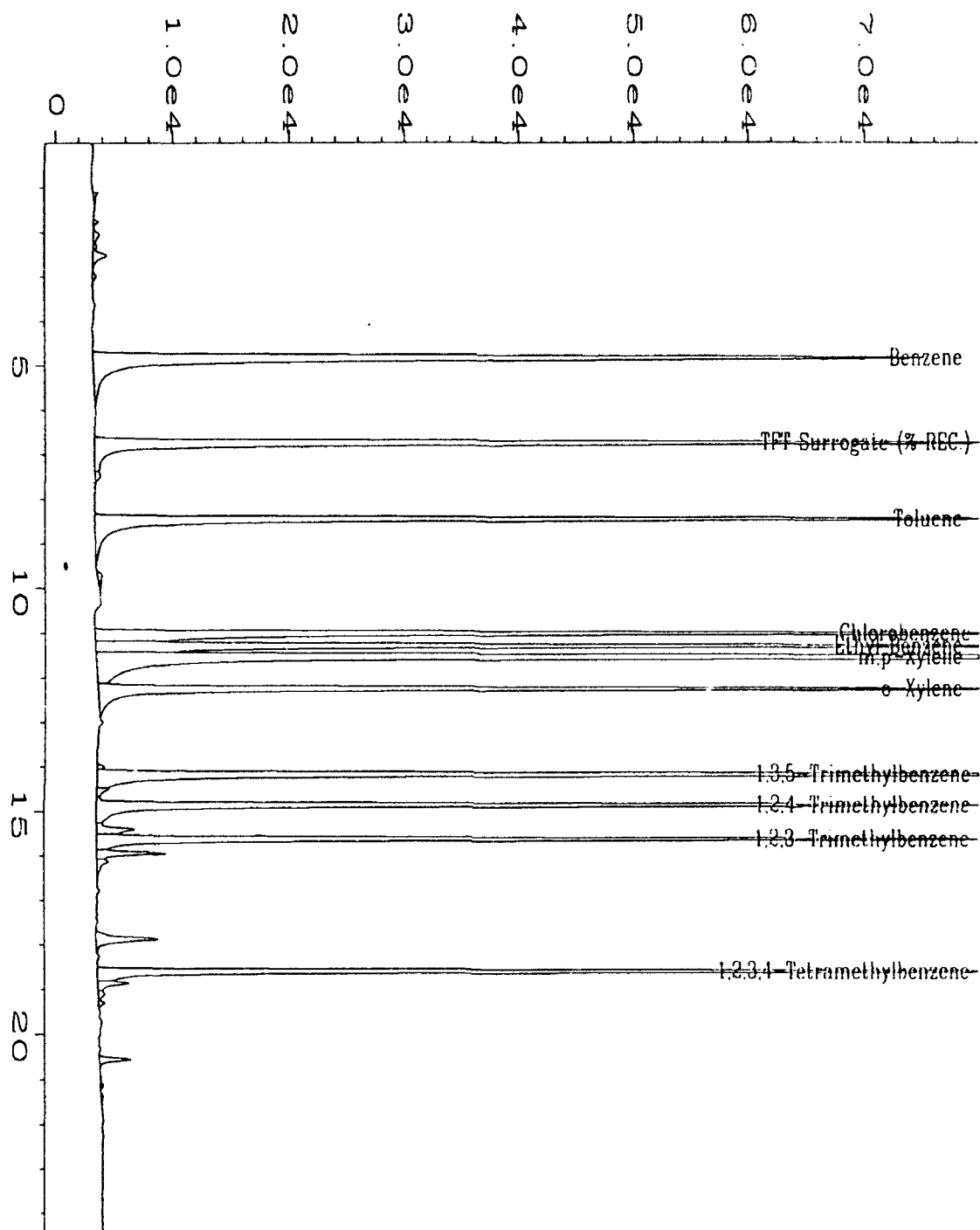
Approved



Data File Name : E:\2\DATA\BX20403\024R0701.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : X04751MS;1;5
 Run Time Bar Code:
 Required on : 03 Apr 95 07:27 PM
 Report Created on: 10 Apr 95 05:12 PM
 Last Recalib on : 10 APR 95 04:19 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 24
 Injection Number : 1
 Sequence Line : 7
 Instrument Method: BX20403.MTH
 Analysis Method : BX20403.MTH
 Sample Amount : 0
 ISTD Amount :

24MP-2D



Data File Name	: C:\HPCHEM\2\DATA\BX20403\025R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 25
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04751MSD;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX2040 T
Acquired on	: 03 Apr 95 08:12 PM	Analysis Method	: BX2040 T
Report Created on	: 10 Apr 95 04:45 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 04:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-0954 CLIENT#: 24MP-2D WATER		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS
TEH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24SS-2	Client Project No.	: 722.450.2102/MAC
Lab Sample No.	: X04770	Lab Project No.	: 95-0954
Date Sampled	: 3/23/95	EPA Method No.	: 3500/MOD.8015
Date Received	: 3/24/95	Matrix	: SOIL
Date Prepared	: 3/29/95	Method Blank	: SB032995
Date Analyzed	: 3/31/95-4/1/95		

Compound	Spike Added (ug/mL)	Sample Concentration (ug/mL)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Jet Fuel	1000	693	1520	83	60-140

Compound	Spike Added (ug/mL)	MSD Concentration (ug/mL)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Jet Fuel	1000	1570	88	5.9	50	60-140

* = Values outside of QC limits.

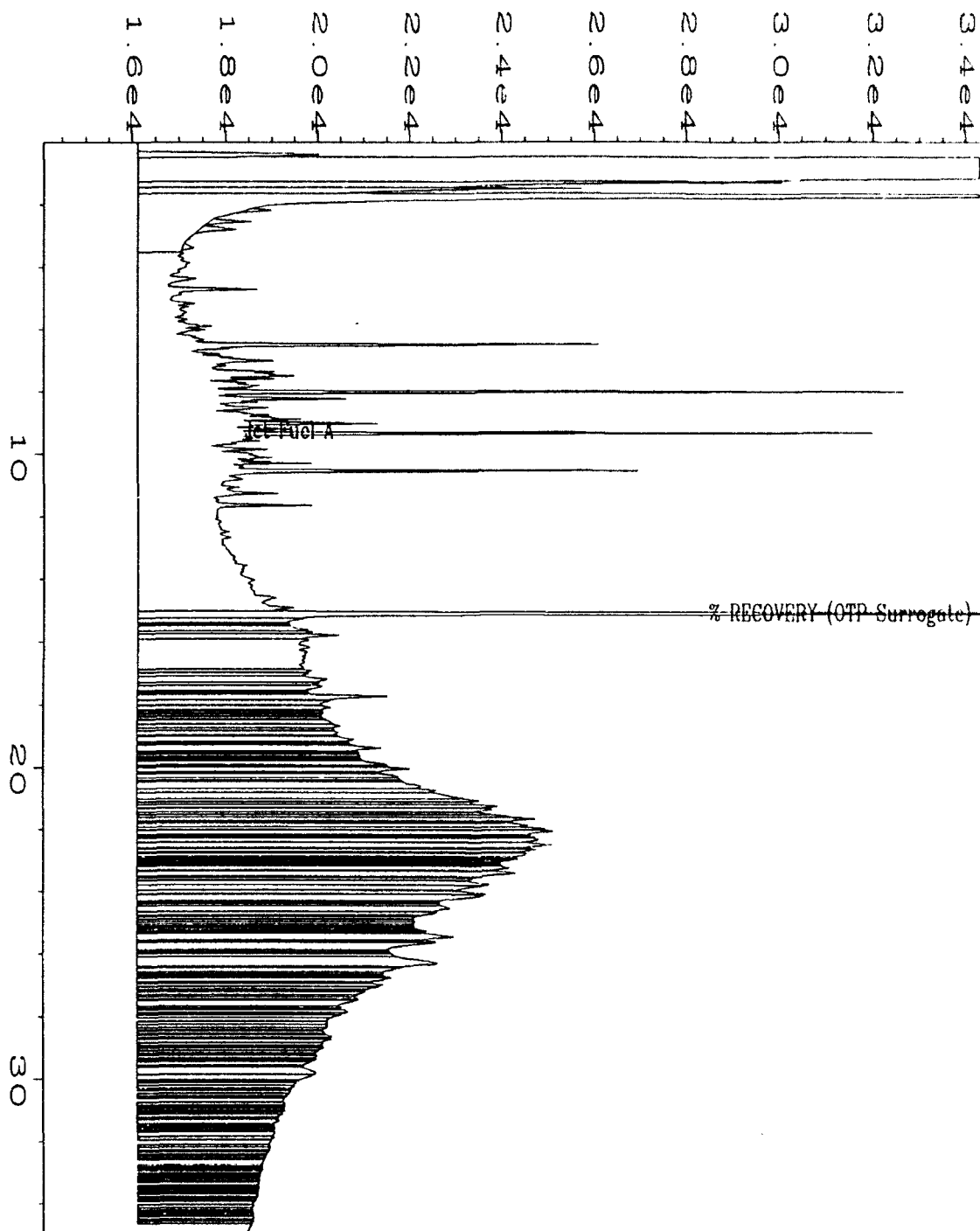
RPD: 0 out of (1) outside limits.

Spike Recovery: 0 out of (1) outside limits.

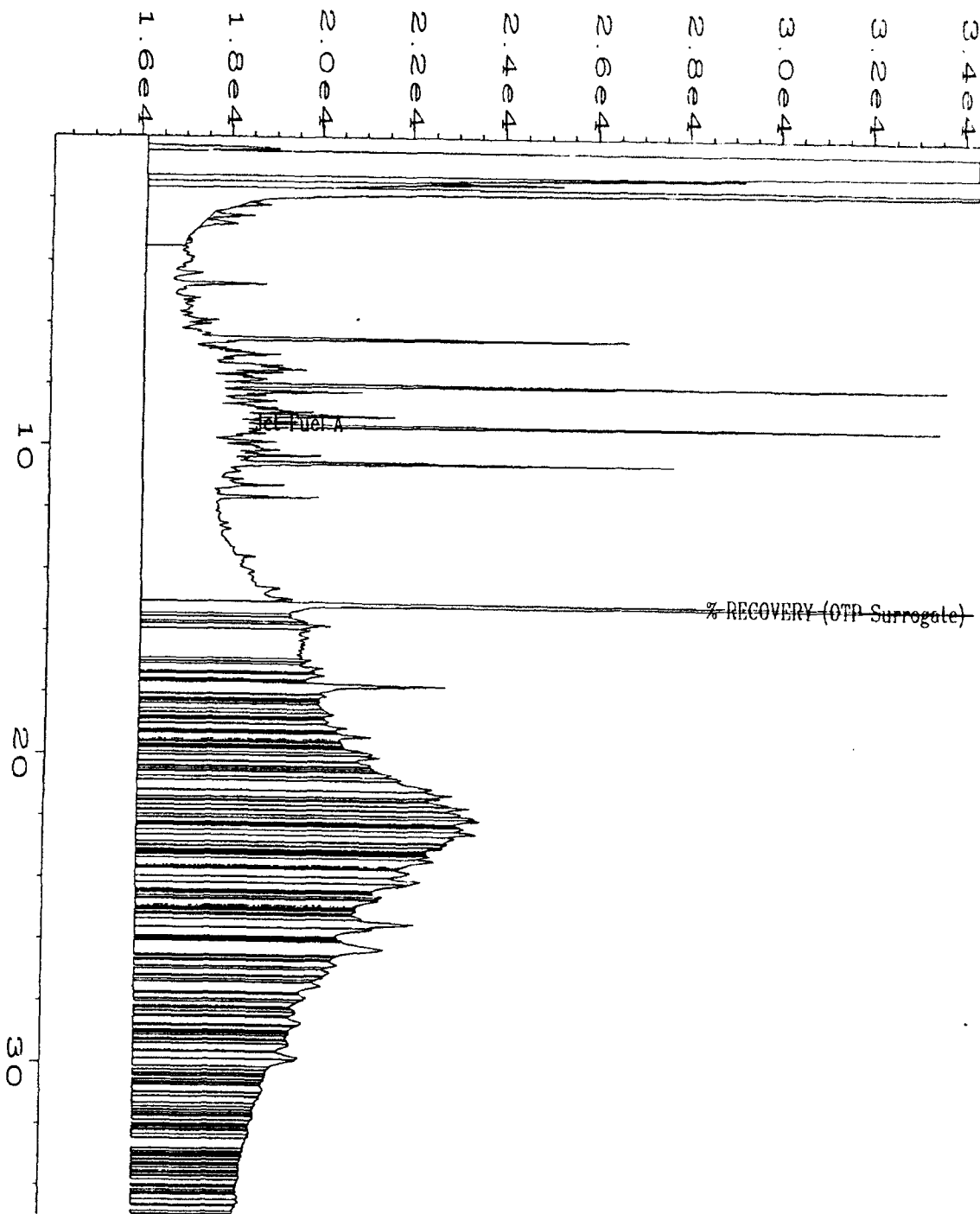
Comments: NA = Not analyzed/not applicable.

Values reported in ug/mL in the liquid extract.

mjm



Data File Name	: C:\HPCHEM\2\DATA\JET0331\012R0801.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TEH	Injection Number	: 1
Sample Name	: X04770 MS	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	: JET0331.MT
Acquired on	: 31 Mar 95 08:18 PM	Analysis Method	: JET0331.MT
Report Created on:	: 31 Mar 95 08:54 PM	Sample Amount	: 0
Last Recalib on	: 31 Mar 95 02:18 PM	ISTD Amount	: 0
Multiplier	: 1		



Data File Name	: C:\HPCHEM\2\DATA\JET0331\013R0801.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 13
Instrument	: TEH	Injection Number	: 1
Sample Name	: X04770 MSD	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	JET0331.MTH
quired on	: 31 Mar 95 09:08 PM	Analysis Method	: JET0331.MTH
port Created on:	31 Mar 95 09:43 PM	Sample Amount	: 0
Last Recalib on	: 31 Mar 95 02:18 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040395
Date Prepared : 4/3/95
Date Analyzed : 4/3/95

Client Project No. : 722450.21020
Lab Project No. : 95-0954
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040318

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 99% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

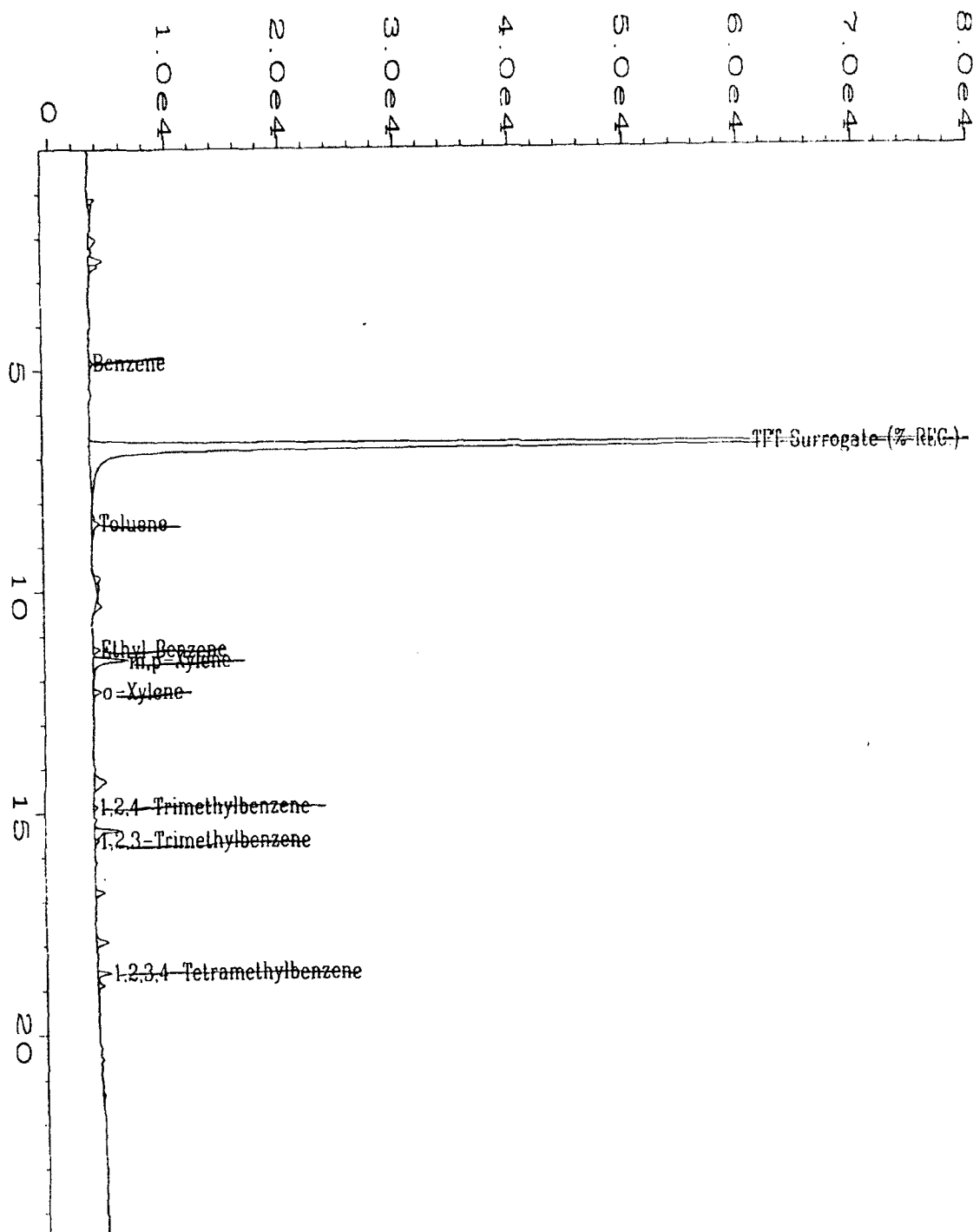
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20403\018R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB040395	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX20403.MTH
quired on	: 03 Apr 95 02:56 PM	Analysis Method	: BX20403.MTH
Report Created on:	10 Apr 95 04:41 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 04:19 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB040495	Client Project No.	: 722450.21020
Date Prepared	: 4/4/95	Lab Project No.	: 95-0954
Date Analyzed	: 4/4/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2040409

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.7	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	97%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

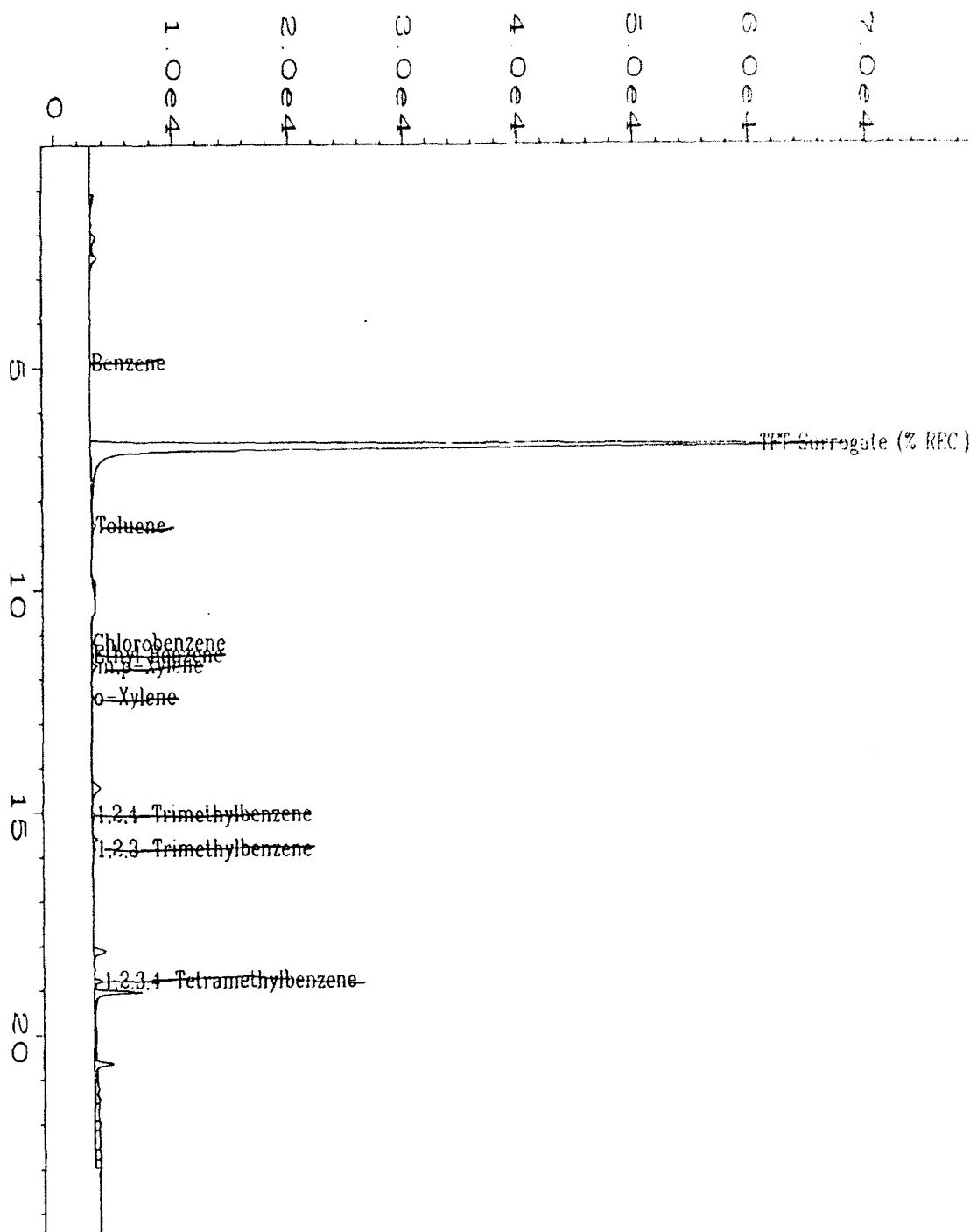
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Come
Analyst

P. McClellan
Approved



Data File Name : E:\2\DATA\BX20404\009R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : MB040495
 Run Time Bar Code:
 quired on : 04 Apr 95 06:01 AM
 Report Created on: 26 Apr 95 05:52 PM
 Last Recalib on : 14 APR 95 02:10 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 9
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20404.MTH
 Analysis Method : BX20404.MTH
 Sample Amount : 0
 ISTD Amount :

Prn 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB040595
Date Prepared : 4/5/95
Date Analyzed : 4/5/95

Client Project No. : 722450.21020
Lab Project No. : 95-0954
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1040509

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 93% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

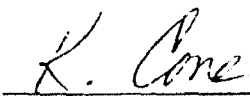
B = Compound also found in the blank.

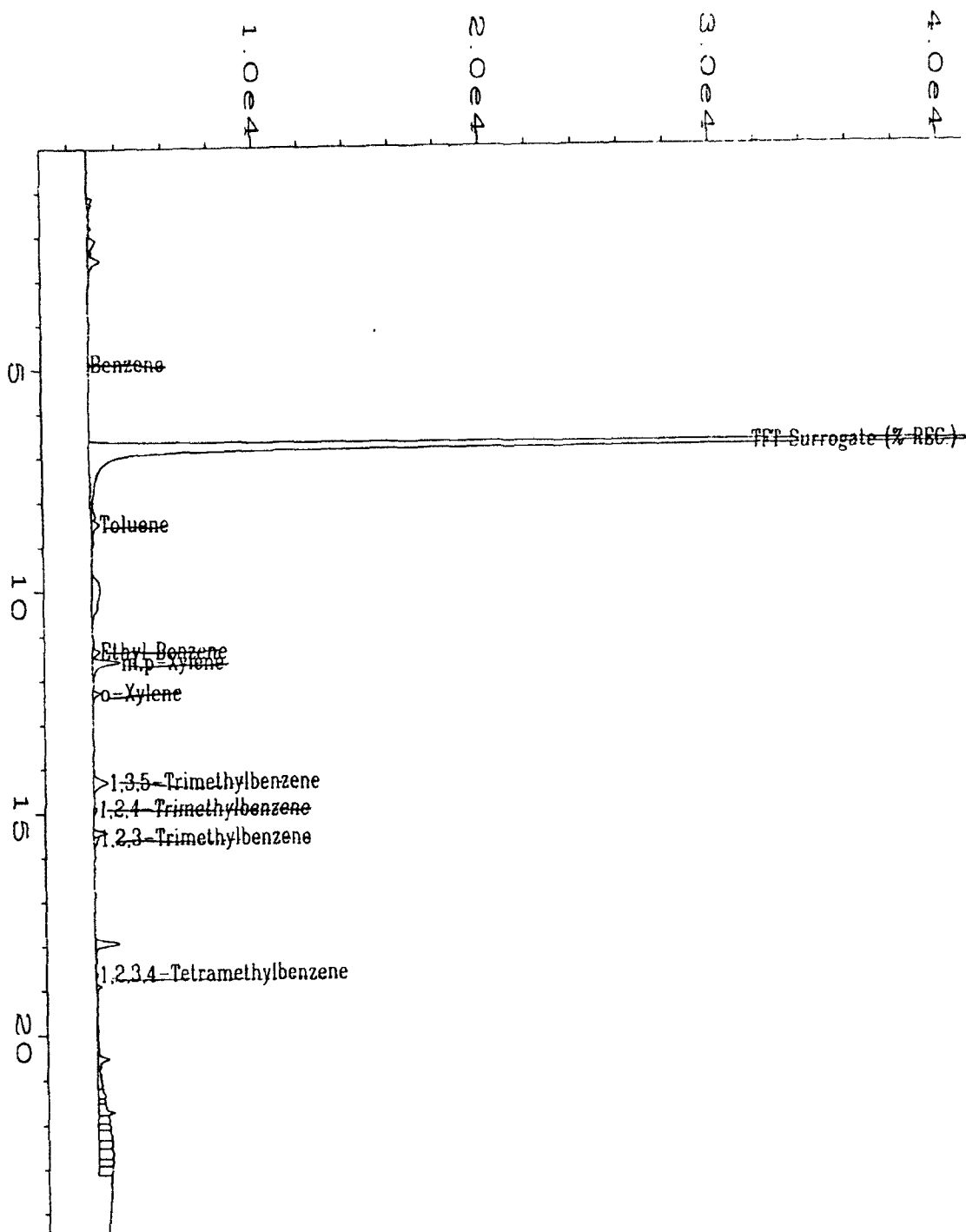
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20405\009R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB040595	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20405.MTH
quired on	: 05 Apr 95 04:21 PM	Analysis Method	: BX20405.MTH
port Created on:	: 06 Apr 95 08:31 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		

pr 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB040695
Date Extracted/Prepared : 4/6/95
Date Analyzed : 4/6/95

Client Project No. : 722450.21020
Lab Project No. : 95-0954
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2040609

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	1.0
Toluene	108-88-3	U	1.0
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	U	1.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	1.0
1,3,5-Trimethylbenzene	108-67-8	U	1.0
1,2,4-Trimethylbenzene	95-63-6	U	1.0
1,2,3-Trimethylbenzene	526-73-8	U	1.0
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 105% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

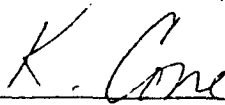
U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

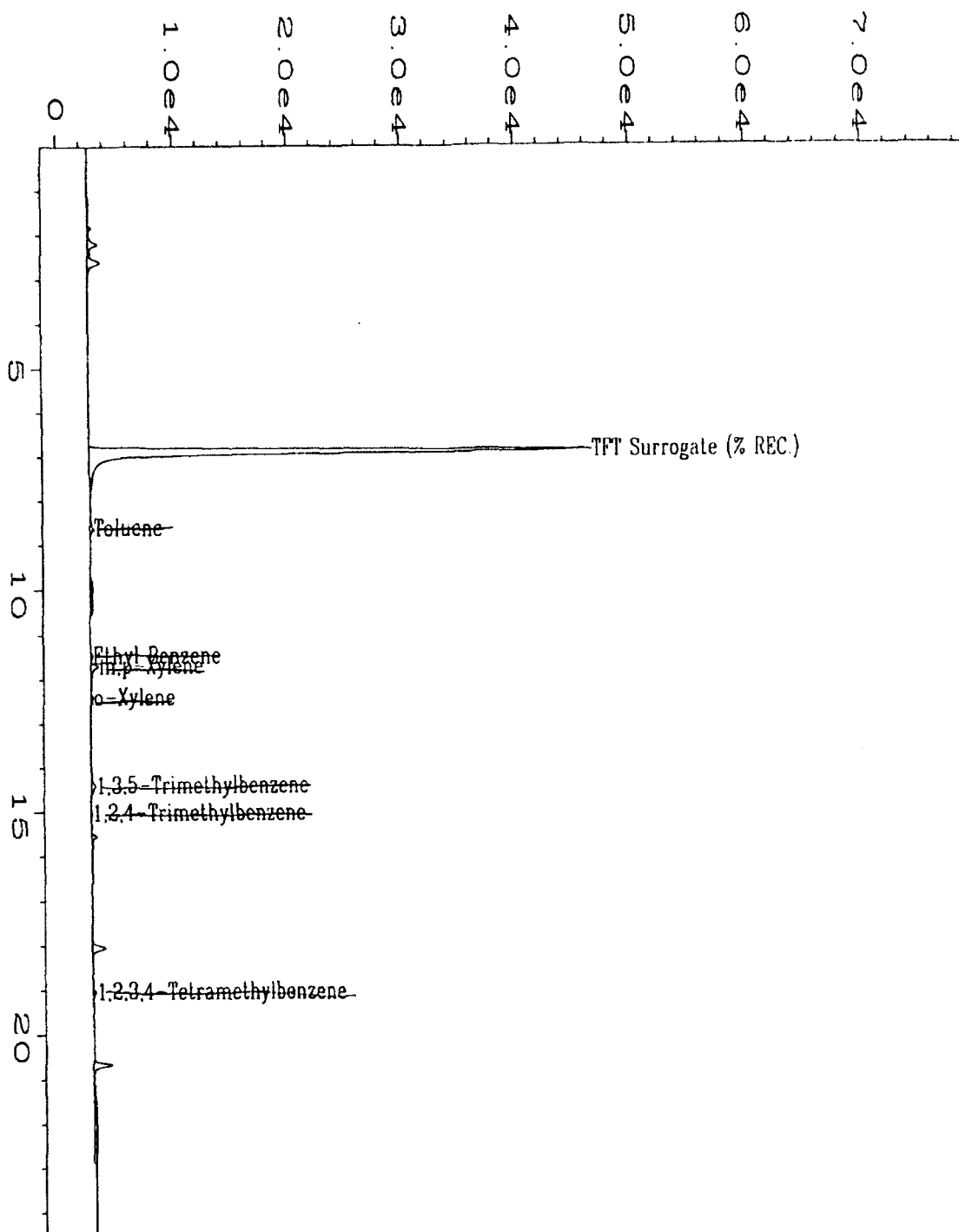
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20406\009R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB040695	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20406.MTH
Required on	: 06 Apr 95 02:47 PM	Analysis Method	: BX20406.MTH
Report Created on:	14 Apr 95 02:46 PM	Sample Amount	: 0
Last Recalib on	: 07 APR 95 07:38 AM	ISTD Amount	:
Multiplier	: 1		

Run 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-602

Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.21020
Lab Sample Number	: X04763	Lab Project No.	: 95-0954
Date Sampled	: 3/22/95	Dilution Factor	: 1.00
Date Received	: 3/24/95	Method	: 602
Date Prepared	: 4/5/95	Matrix	: Water
Date Analyzed	: 4/6/95	Lab File No.	: BX2040521
		Method Blank No.	: MB040595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 88% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

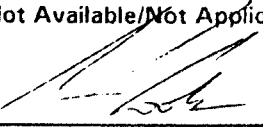
U = Compound analyzed for, but not detected.

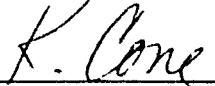
B = Compound also found in the blank.

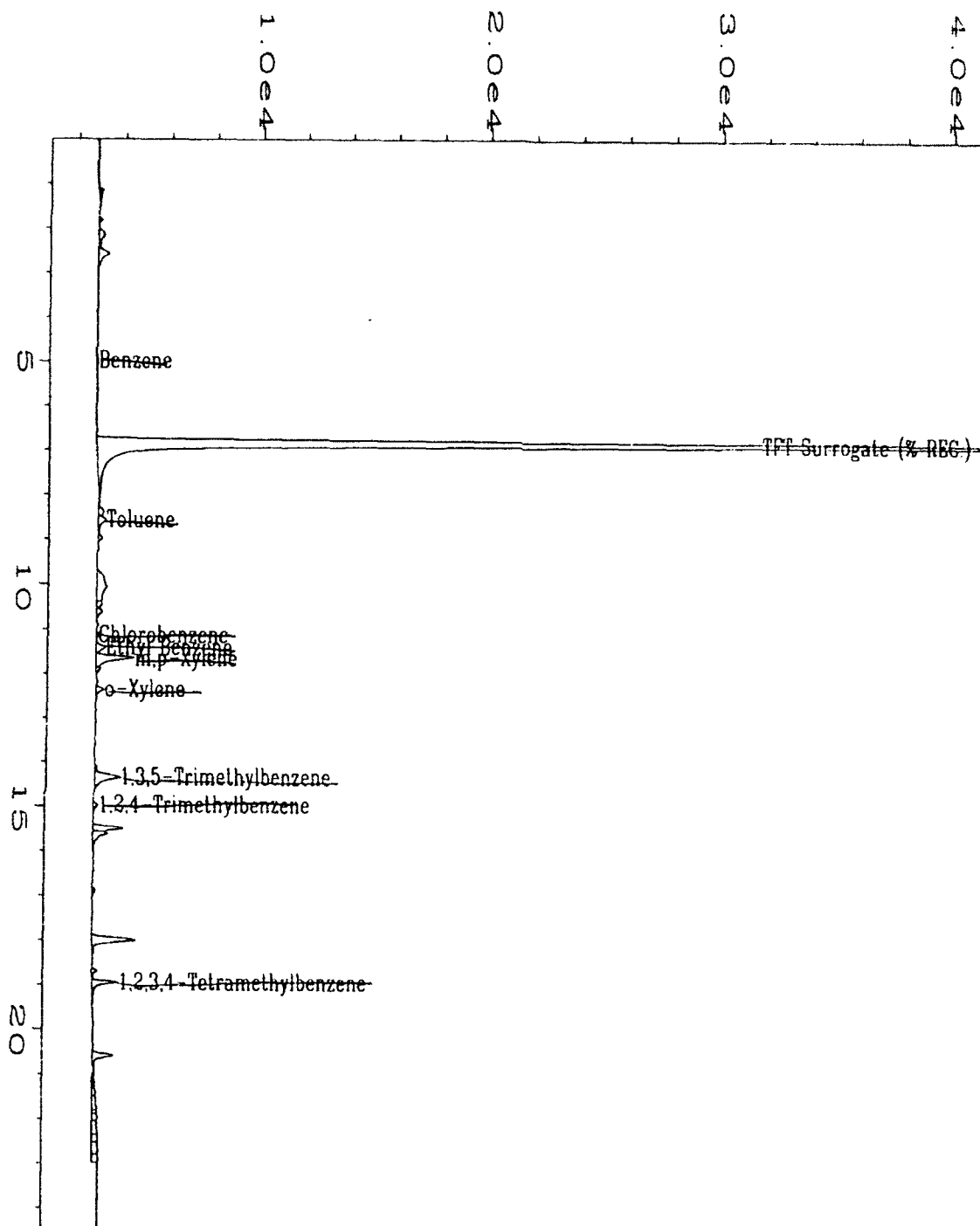
J = Indicates an estimated value when the compound is detected, but is below the Reporting
Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20405\021R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 21
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04763;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20405.MTH
Acquired on	: 06 Apr 95 01:29 AM	Analysis Method	: BX20405.MTH
Report Created on	: 06 Apr 95 08:39 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0954 Client#: TRIP BLANK Water		

pm 4/27/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS040395 Dilution Factor : 1.00
Date Extracted/Prepared : 4/3/95 Method : 602
Date Analyzed : 4/3/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX20403019

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.2	86.0	71.0-119.0*
Toluene	108-88-3	17.8	89.0	73.0-111.0*
Chlorobenzene	108-90-7	16.8	84.0	64.0-119.0*
Ethyl Benzene	100-41-4	17.5	87.5	75.0-114.0*
m,p-Xylene	108-38-3	37.8	106.0	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	17.4	87.0	64.0-114.0*
1,3,5-Trimethylbenzene	108-67-8	18.2	91.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	16.5	82.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	16.4	82.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	16.4	82.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		92%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

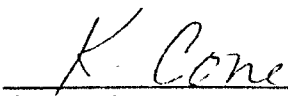
U = Compound analyzed for, but not detected.

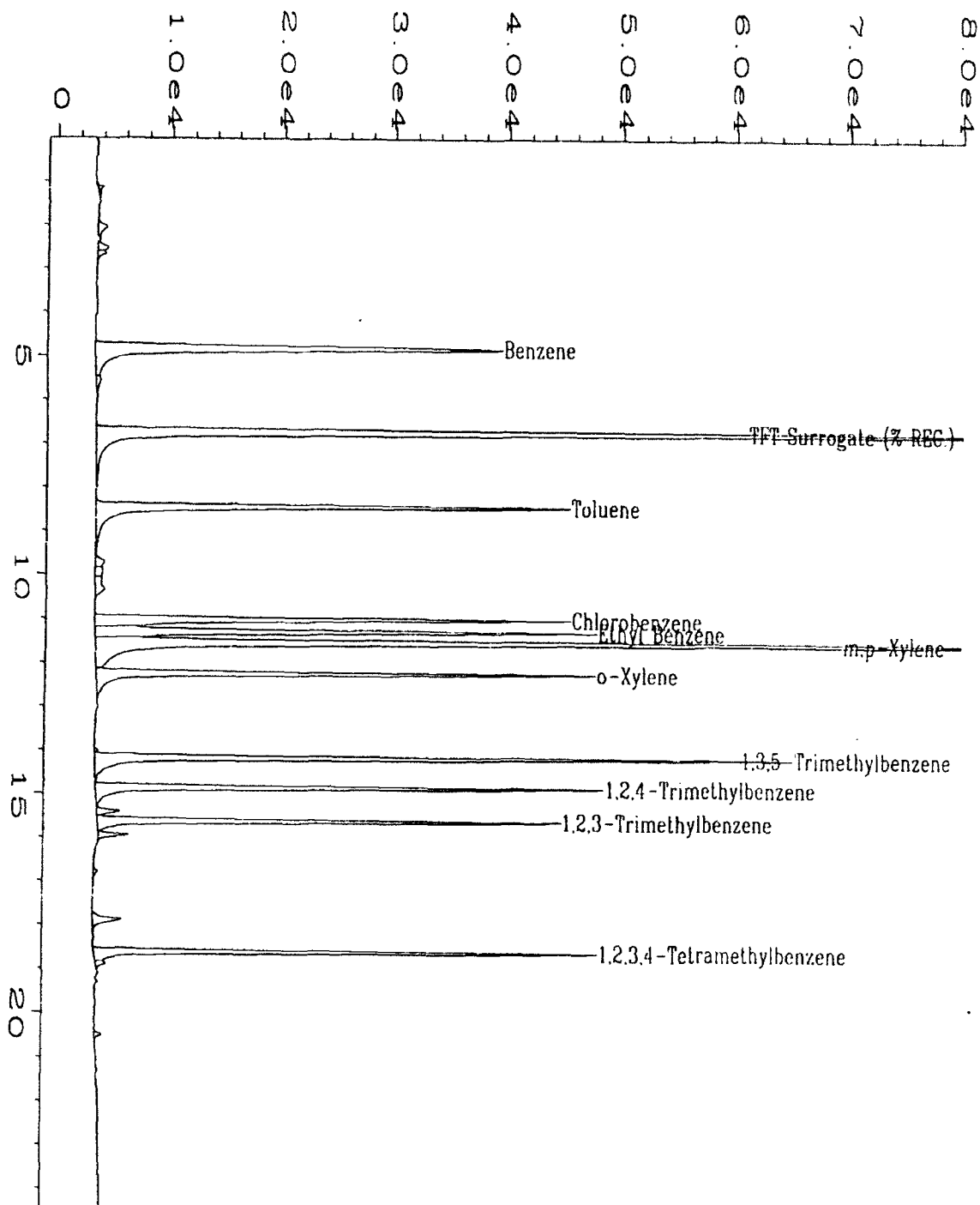
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20403\019R0701.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 19
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS040395	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX20403.MTH
Acquired on	: 03 Apr 95 03:41 PM	Analysis Method	: BX20403.MTH
Report Created on	: 10 Apr 95 04:41 PM	Sample Amount	: 0
Last Recalib on	: 10 APR 95 04:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: REF #1649		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS040495 Dilution Factor : 1.00
Date Extracted/Prepared : 4/4/95 Method : 602
Date Analyzed : 4/4/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX20404010
GC : BX2

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	15.6	78.0	71.0-119.0*
Toluene	108-88-3	15.9	79.5	73.0-111.0*
Chlorobenzene	108-90-7	15.9	79.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.2	81.0	75.0-114.0*
m,p-Xylene	108-38-3	17.2	86.0	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	16.0	80.0	64.0-114.0*
1,3,5-Trimethylbenzene	108-67-8	16.7	83.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.1	85.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.0	100.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.7	93.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		98%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value


U = Compound analyzed for, but not detected.

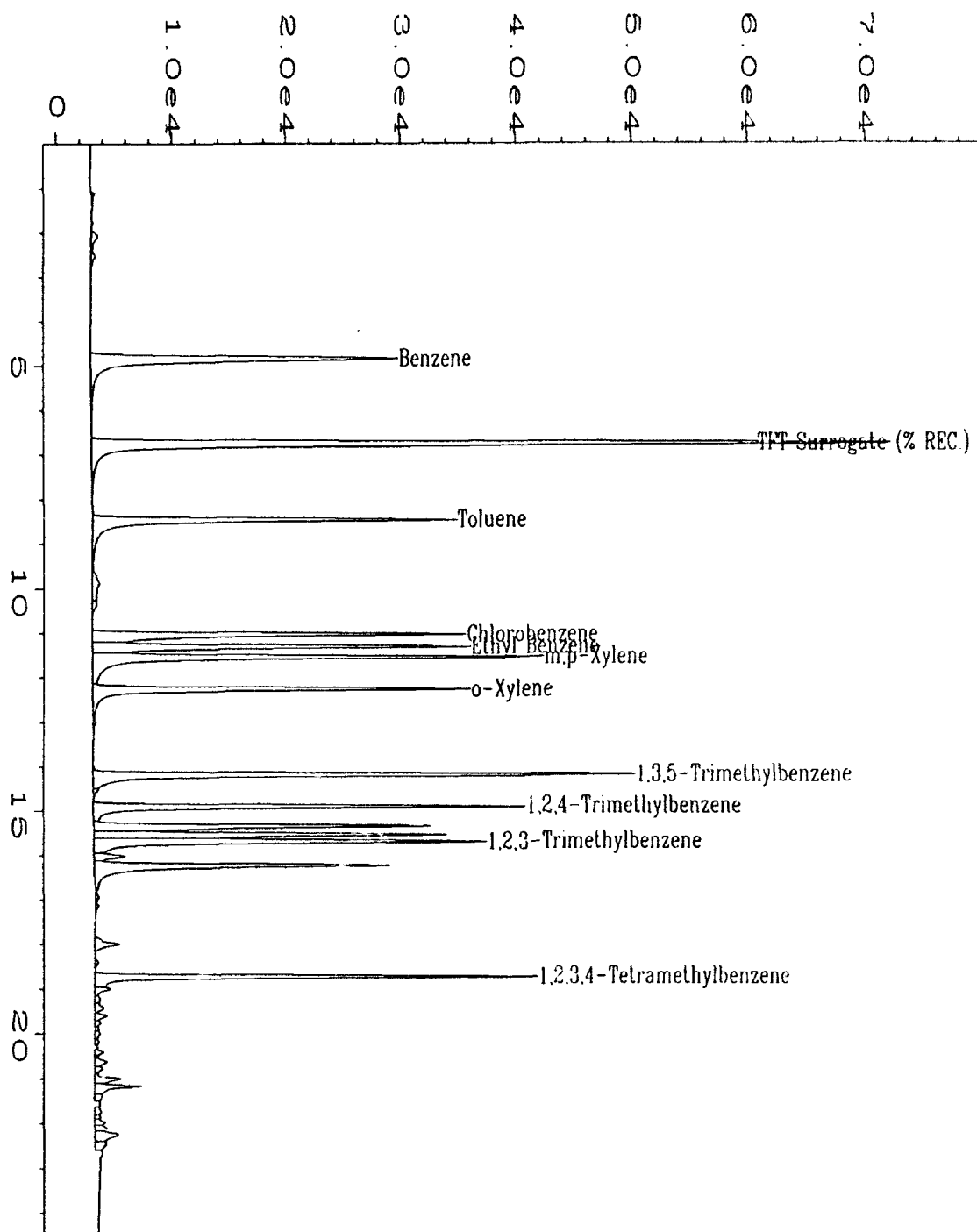
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


Analyst


Approved



Data File Name : E:\2\DATA\BX20404\010R0901.D
 Operator : C.J. Cook
 Instrument : BTEX2
 Sample Name : LCS040495
 Run Time Bar Code:
 Acquired on : 04 Apr 95 06:48 AM
 Report Created on: 26 Apr 95 05:52 PM
 Last Recalib on : 14 APR 95 02:10 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 10
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20404.MTH
 Analysis Method : BX20404.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS040595 Dilution Factor : 1.00
Date Extracted/Prepared : 4/5/95 Method : 602
Date Analyzed : 4/5/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2040510

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	15.8	79.0	71.0-119.0*
Toluene	108-88-3	16.2	81.0	73.0-111.0*
Chlorobenzene	108-90-7	16.3	81.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.6	83.0	75.0-114.0*
m,p-Xylene	108-38-3	17.6	88.0	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	16.7	83.5	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	16.9	84.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.4	87.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.1	100.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.9	89.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		93%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

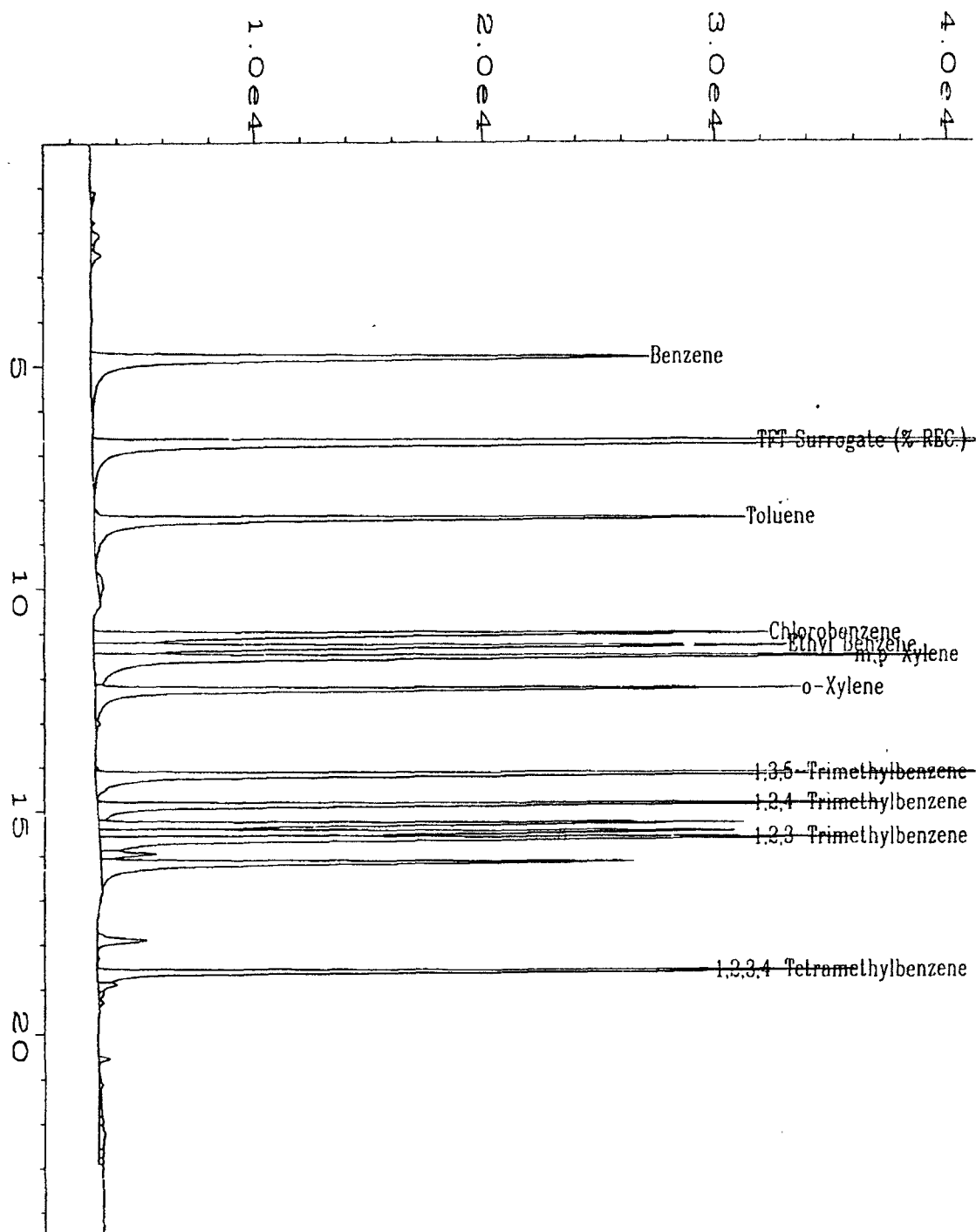
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

AmcCleb
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20405\010R0901.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS040595	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20405.MTH
Acquired on	: 05 Apr 95 05:07 PM	Analysis Method	: BX20405.MTH
Port Created on:	: 06 Apr 95 08:32 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:23 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS040695 Dilution Factor : 1.00
Date Extracted/Prepared : 4/6/95 Method : 602
Date Analyzed : 4/6/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2040610

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	15.8	79.0	71.0-119.0*
Toluene	108-88-3	16.2	81.0	73.0-111.0*
Chlorobenzene	108-90-7	16.2	81.0	64.0-119.0*
Ethyl Benzene	100-41-4	16.8	84.0	75.0-114.0*
m,p-Xylene	108-38-3	18.2	91.0	75.0-114.0*
o-Xylene	106-42-3			
	95-47-6	16.6	83.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	17.1	85.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.4	87.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.8	104.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.4	87.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		106%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

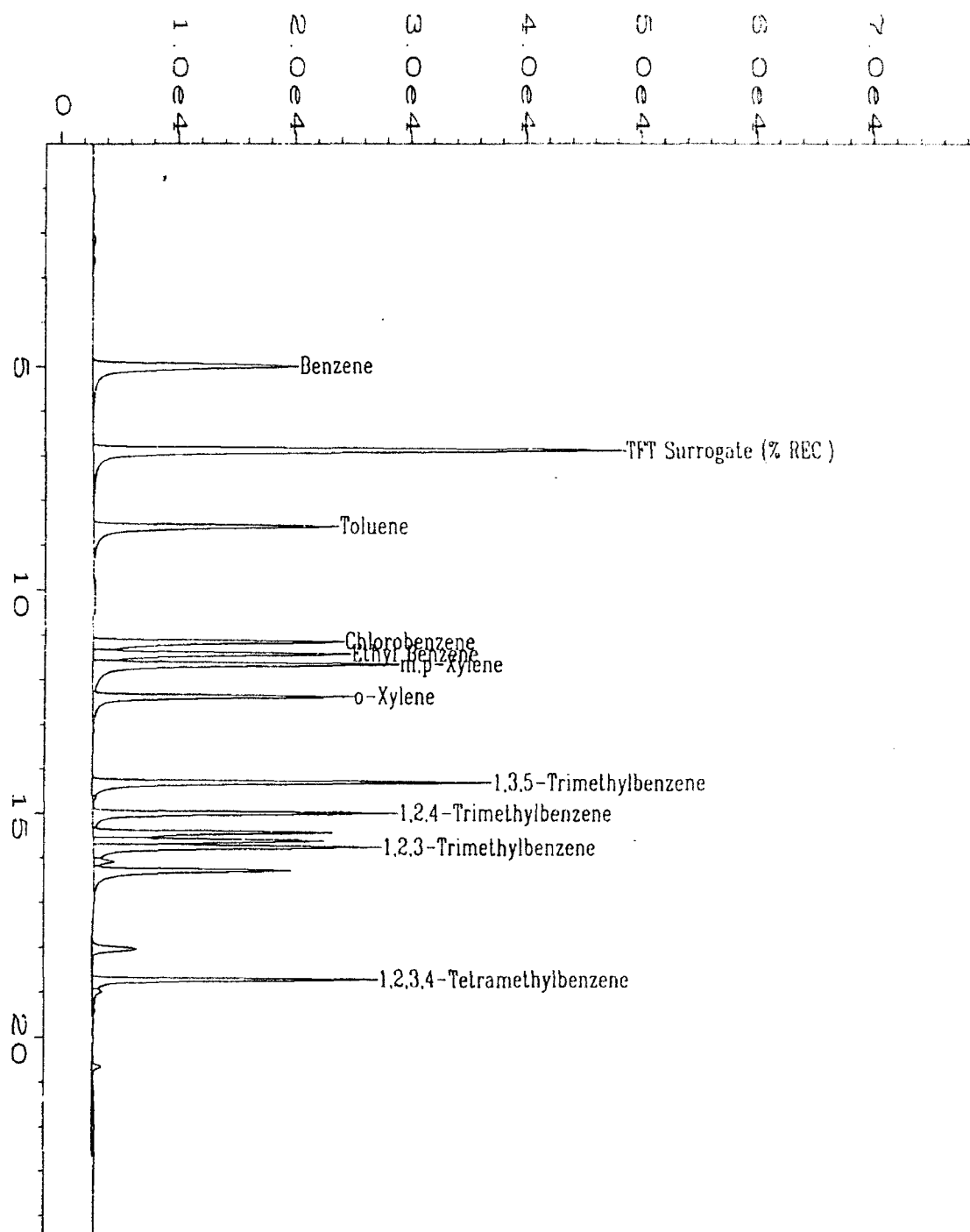
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K Cone
Analyst

P. McClure
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20406\010R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS040695	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20406.MTH
Acquired on	: 06 Apr 95 03:32 PM	Analysis Method	: BX20406.MTH
Report Created on:	07 Apr 95 08:15 AM	Sample Amount	: 0
Last Recalib on	: 07 APR 95 07:38 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 3/22,23/95	Client Project Number	: 722450.21020/MACDILL
Date Received	: 3/24/95	Lab Project Number	: 95-0954
Date Prepared	: 4/2,3/95	Matrix	: Water
Date Analyzed	: 4/2,3,4/95	Method Number	: 5030/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH mg/L	RL mg/L
MB040295	METHOD BLANK	100%	U	0.1
MB040395	METHOD BLANK	75%	U	0.1
MB040395B	METHOD BLANK	101%	U	0.1
X04750	MD24-8	100%	U	0.1
X04751	24MP-2D	108%	U	0.1
X04751 DUP	24MP-2D	108%	U	0.1
X04752	24MP-2S	102%	1.0	0.1
X04753	24MP-1D	103%	U	0.1
X04754	24MP-1S	103%	13	0.5
X04755	MD24-2	98%	U	0.1
X04756	MD24-5	101%	U	0.1
X04757	24MP-4S	107%	U	0.1
X04758	MD24-4	108%	U	0.1
X04759	MD24-41	106%	U	0.1
X04760	MD24-3	106%	U	0.1
X04761	MD24-1	107%	U	0.1
X04762	24MP-5D	105%	U	0.1
X04762 DUP	24MP-5D	104%	U	0.1

QUALIFIERS

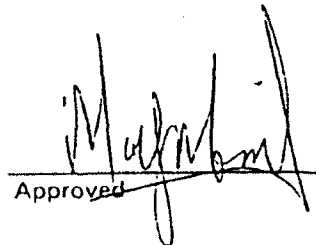
U = TVH analyzed for but not detected.

B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

RL = Reporting Limit


Analyst


Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 3/23/95	Client Project Number	: 722450.21020/MACDILL
Date Received	: 3/24/95	Lab Project Number	: 95-0954
Date Prepared	: 4/3/95	Matrix	: Soil
Date Analyzed	: 4/4/95	Method Number	: 5030/Mod.8015

<u>Evergreen Sample #</u>	<u>Client Sample #</u>	<u>Surrogate Recovery</u>	<u>TVH* mg/Kg</u>	<u>RL* mg/Kg</u>
MB040395B	METHOD BLANK	100%	U	0.1
X04770	24SS-2	102%	U	0.14

* = Result reported on a dry weight basis.

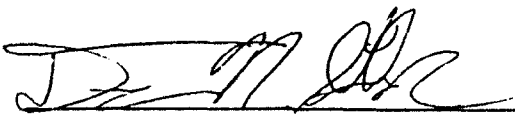
QUALIFIERS

U = TVH analyzed for but not detected.

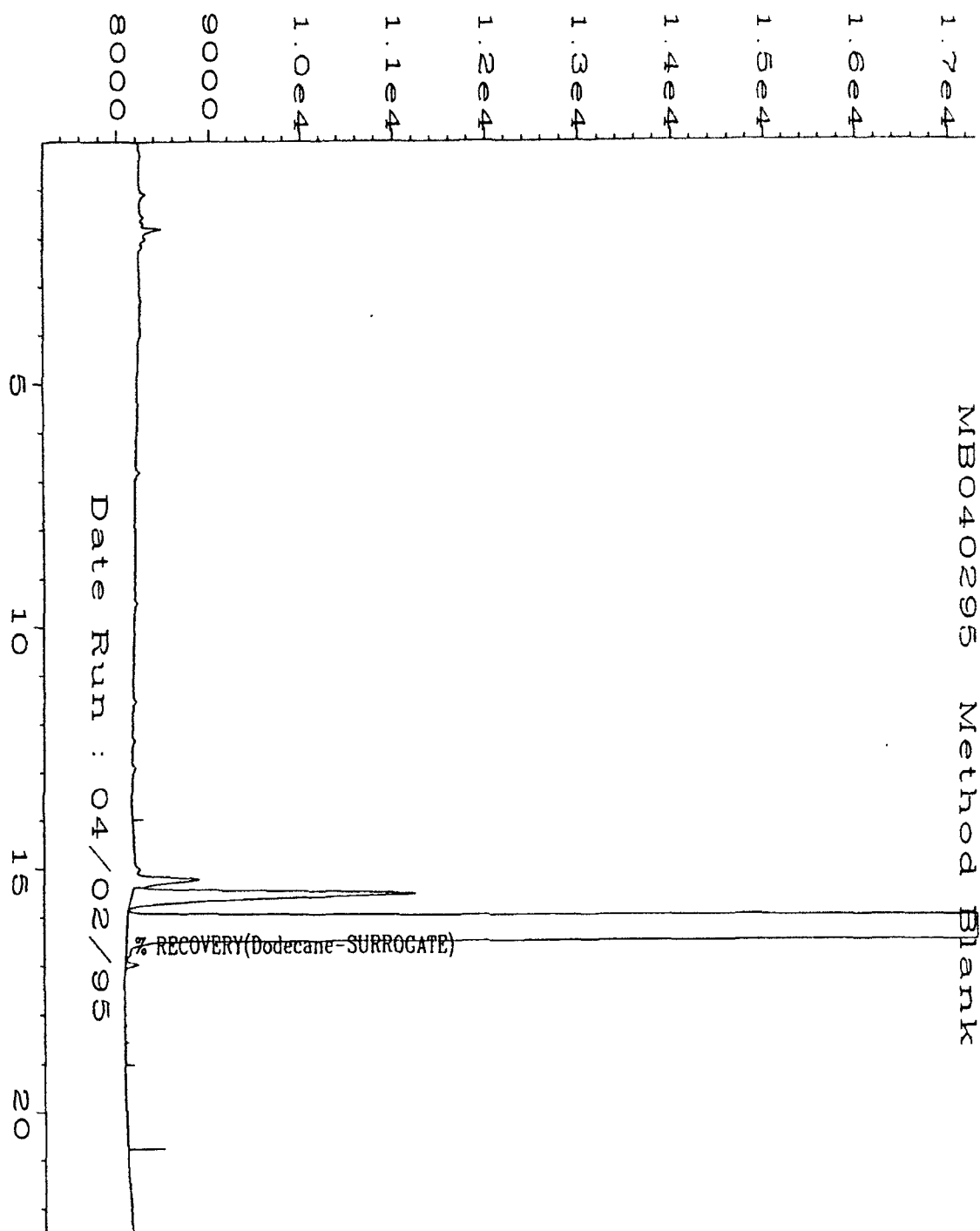
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

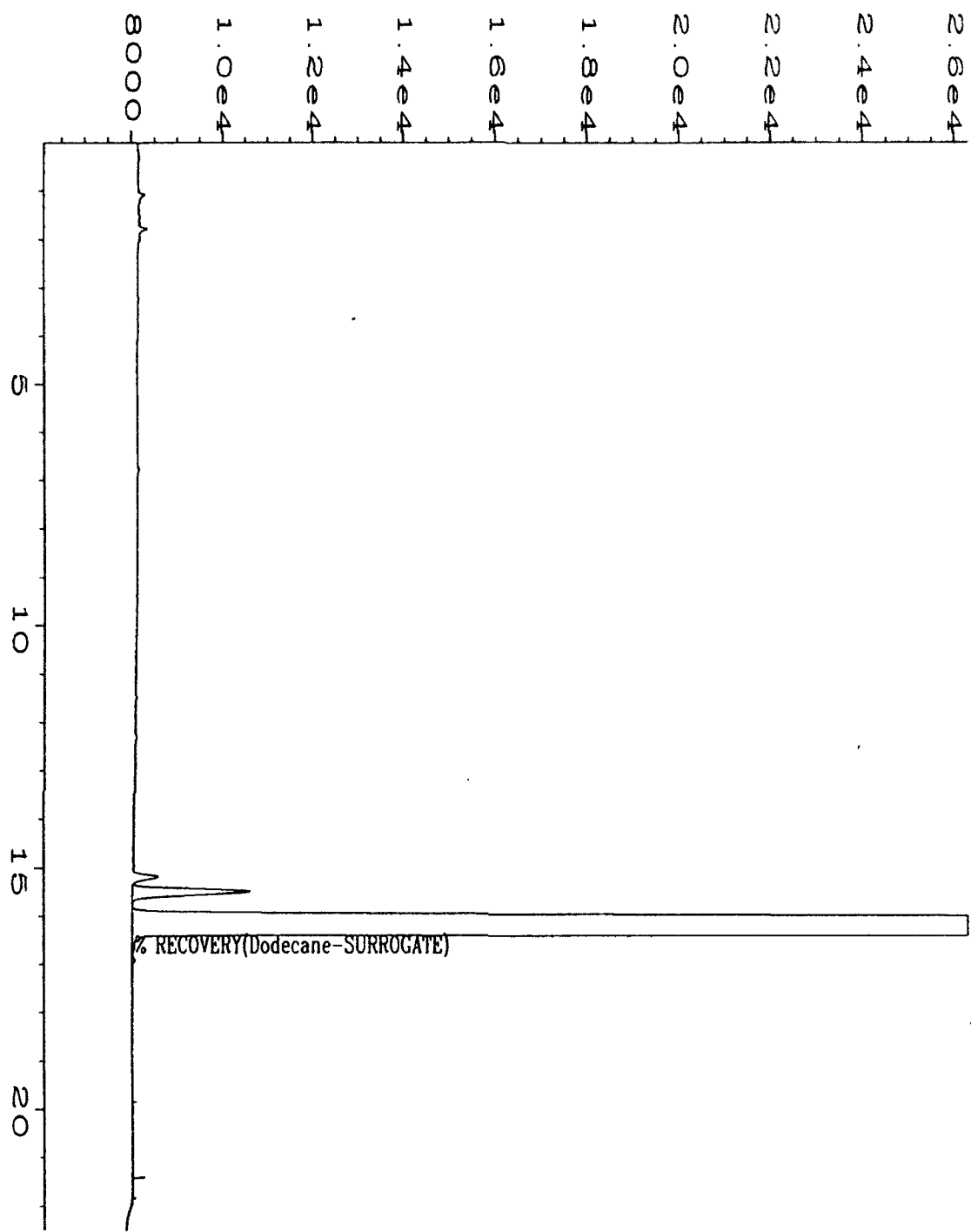
RL = Reporting Limit


Analyst

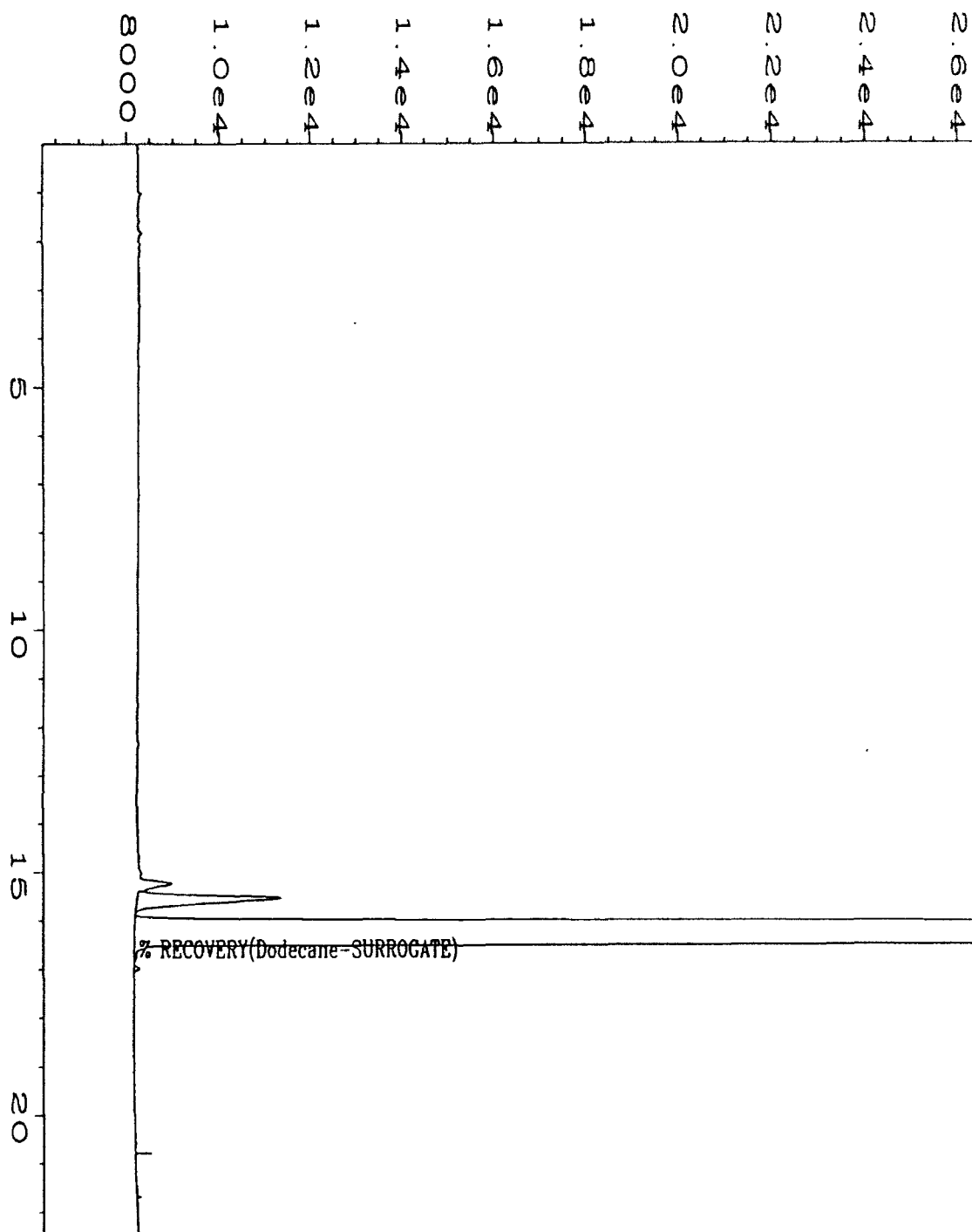

Approved



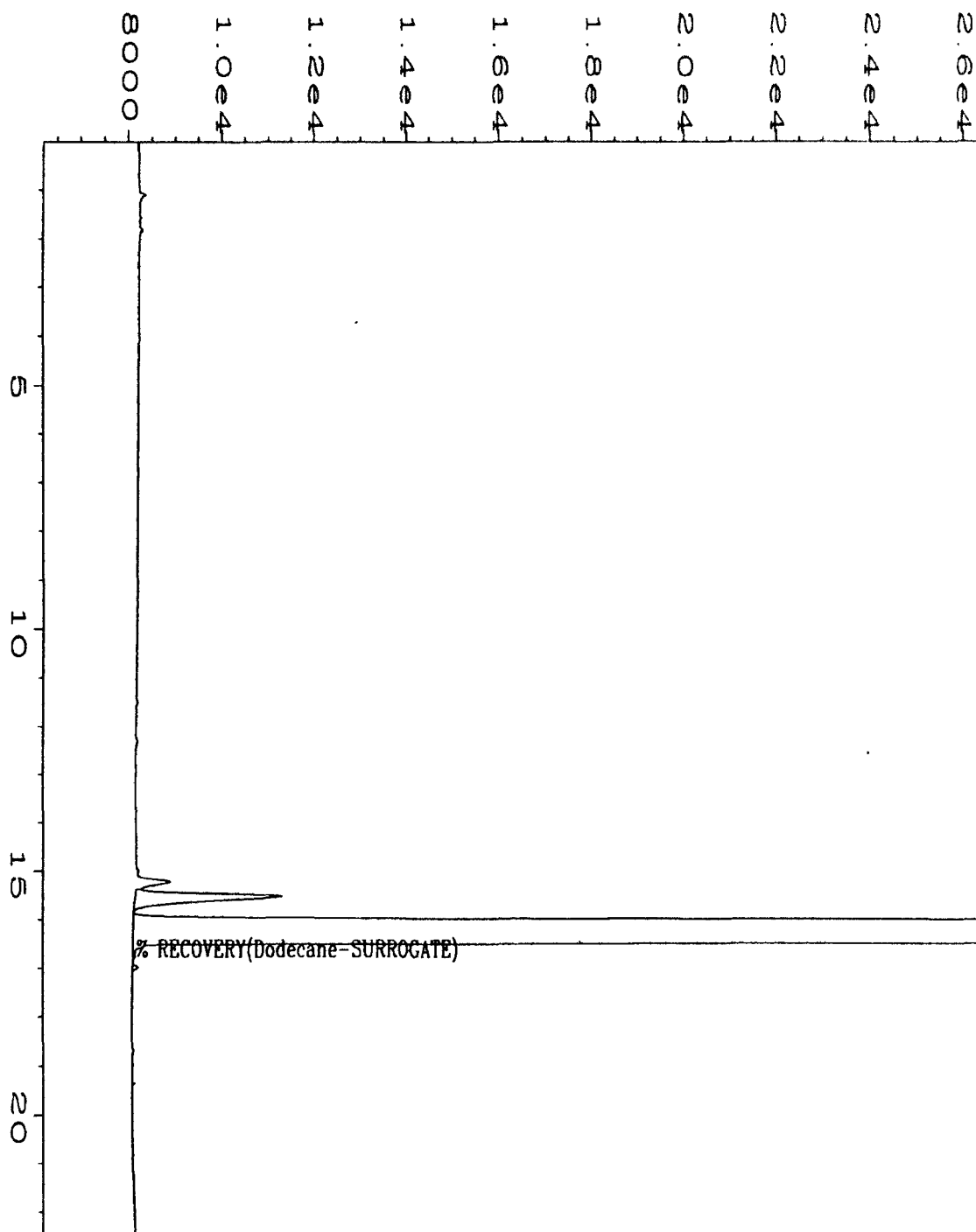
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Operator	: S.W. Tyson	Vial Number	: 7
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB040295	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	TVH0402
Acquired on	: 02 Apr 95 01:46 PM	Analysis Method	: TVH0402...
Report Created on:	02 Apr 95 04:15 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:38 PM	ISTD Amount	:
Multiplier	: 1		



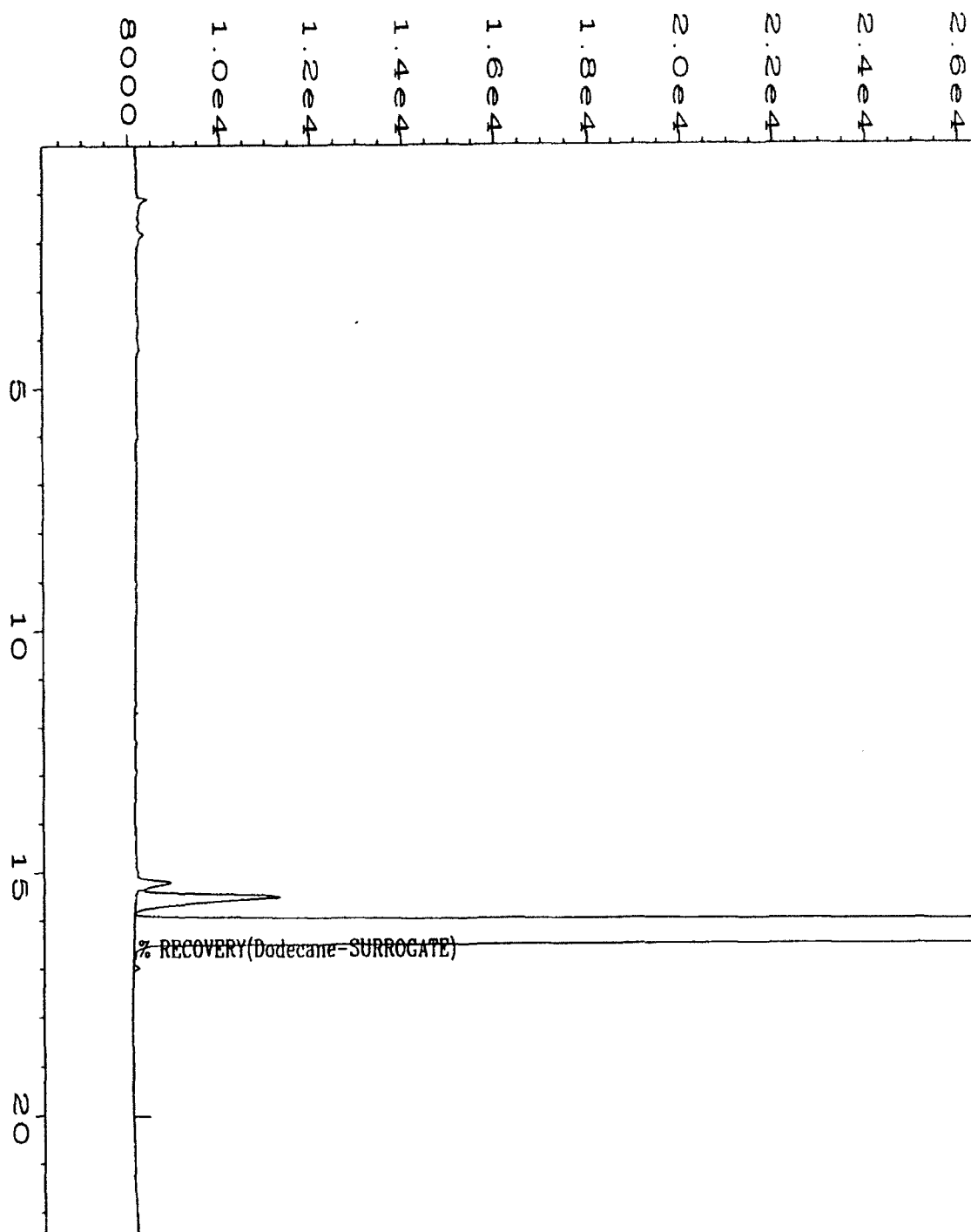
Data File Name	: C:\HPCHEM\1\DATA\TVH0402\028F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 28
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB040395	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0402.MTH
quired on	: 03 Apr 95 08:24 AM	Analysis Method	: TVH0404.MTH
Report Created on:	04 Apr 95 09:55 AM	Sample Amount	: 0
Last Recalib on	: 02 APR 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		



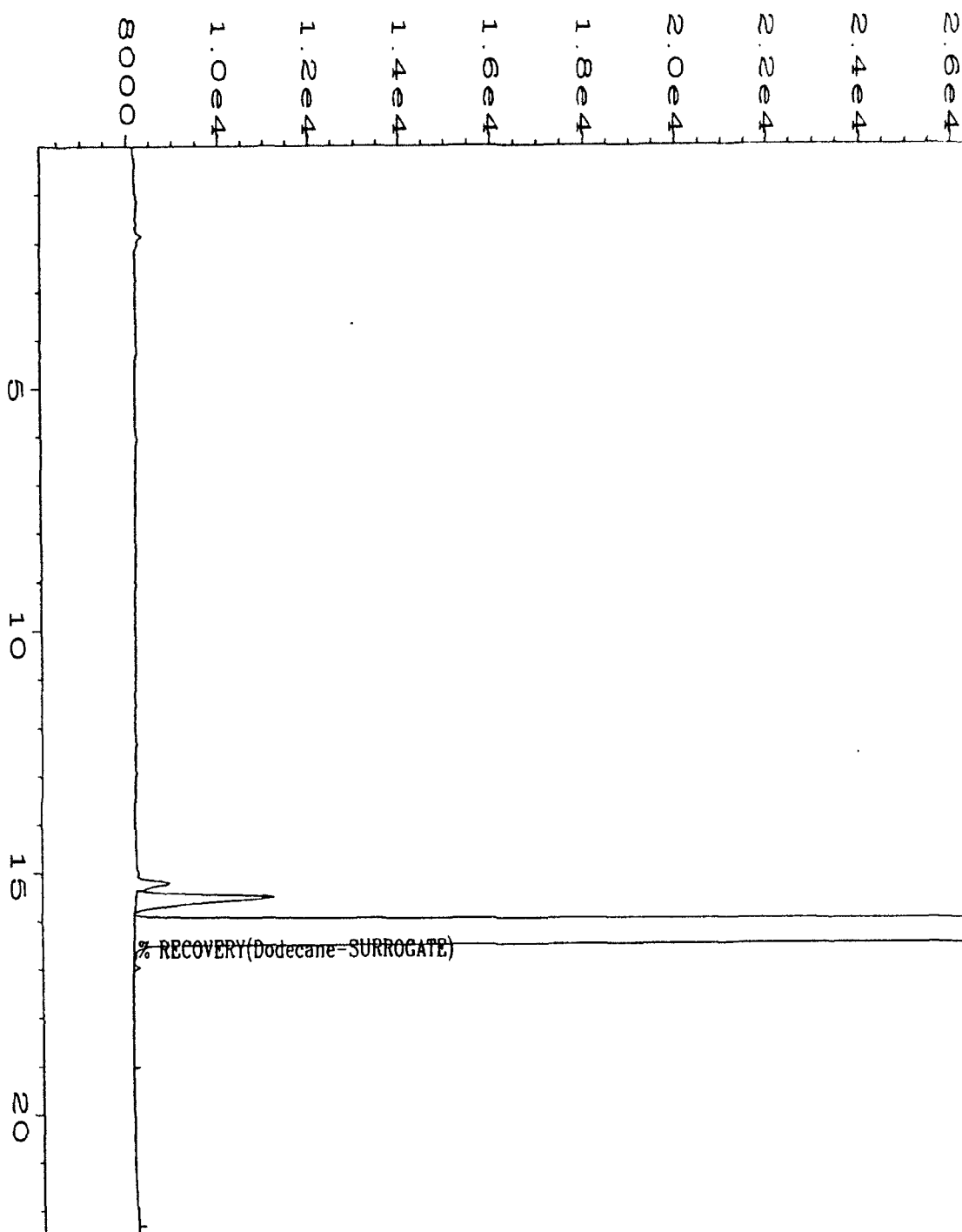
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\050F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 50
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB040395B	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0402.T
Acquired on	: 03 Apr 95 08:52 PM	Analysis Method	: TVH0402.T
Report Created on:	03 Apr 95 09:15 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		



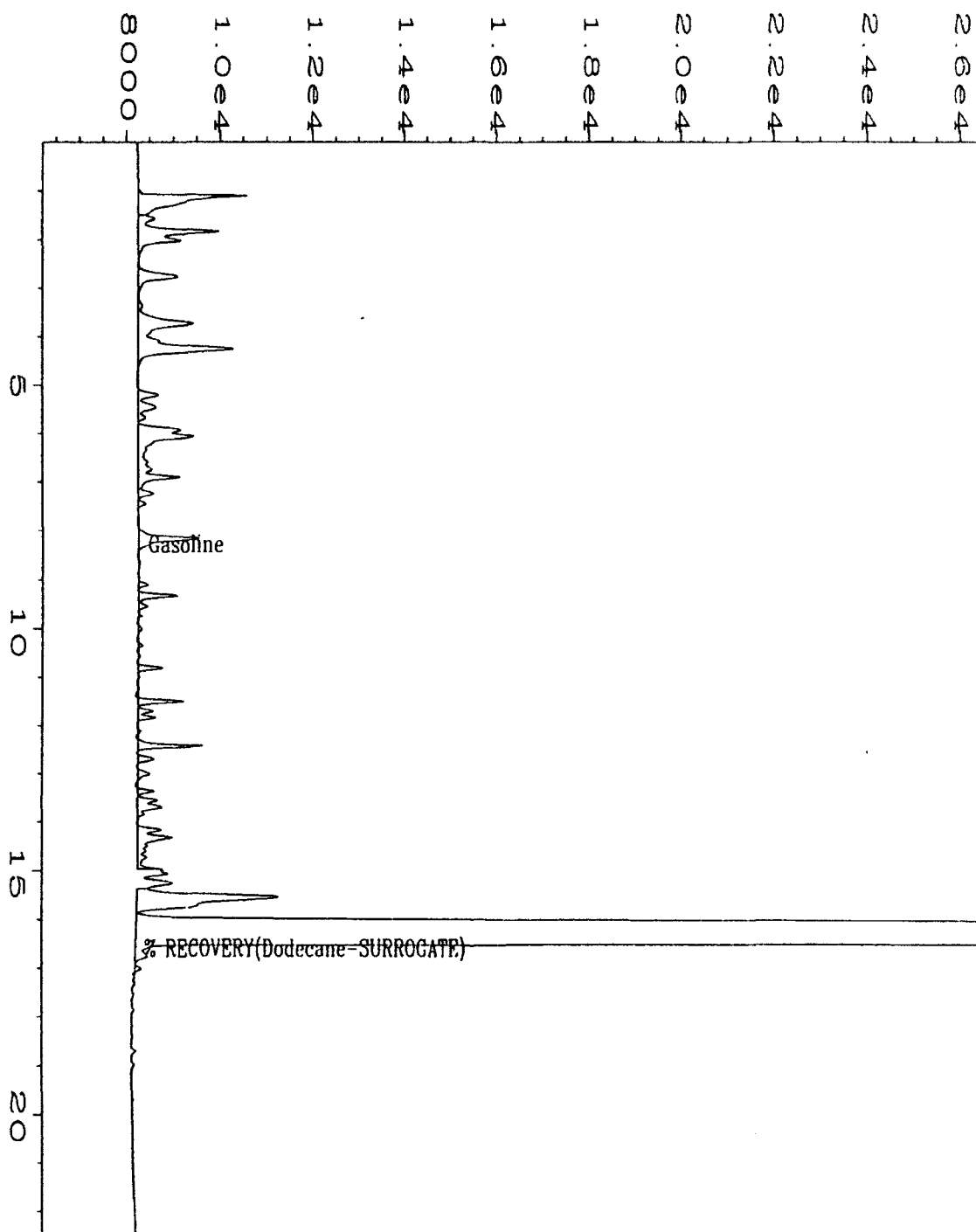
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\033F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 33
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04750 ;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402.MTH
Acquired on	: 03 Apr 95 11:14 AM	Analysis Method	: TVH0402.MTH
Report Created on:	: 03 Apr 95 11:37 AM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # MD24-8 WATER		



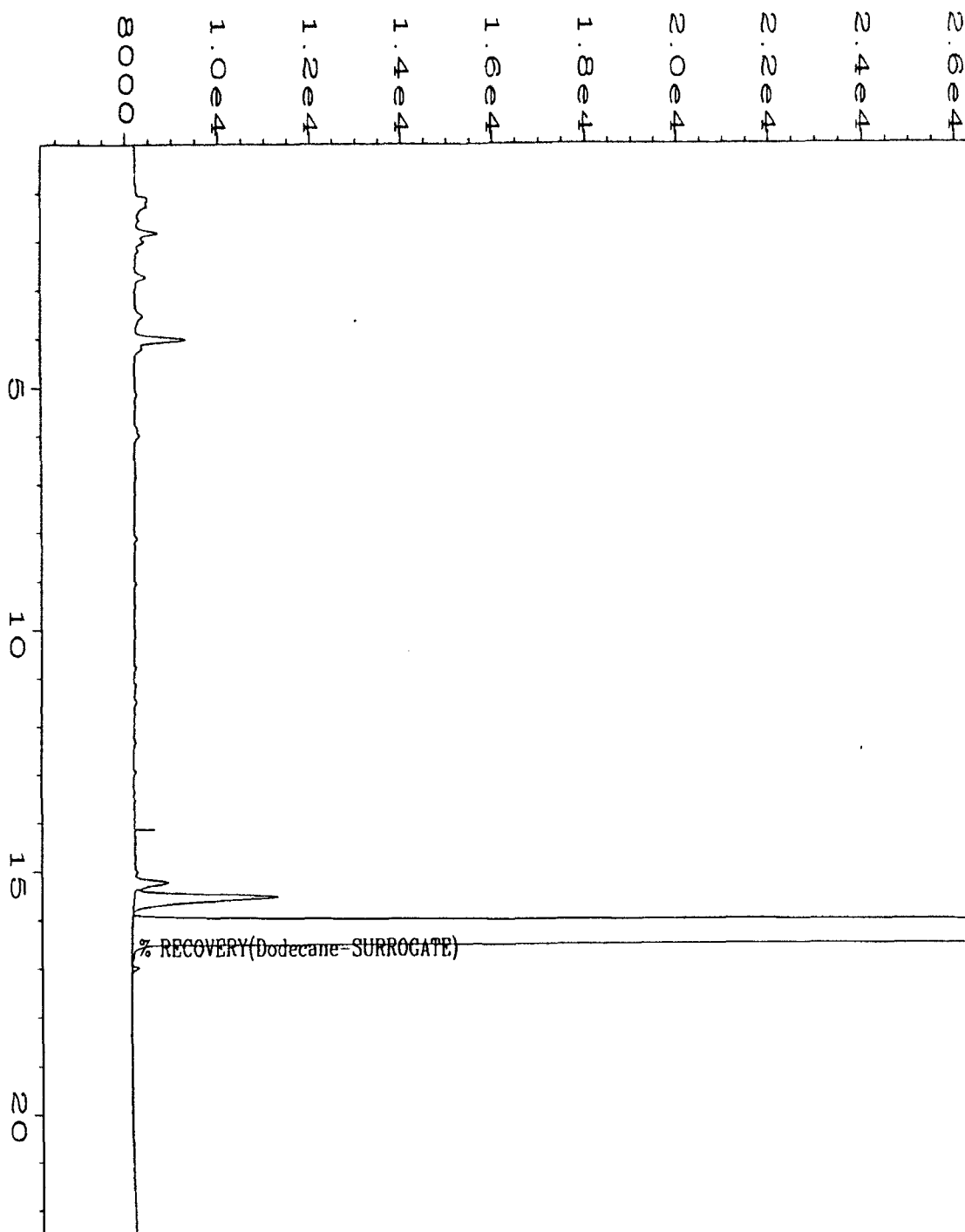
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\037F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 37
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04751;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH040 MT
Acquired on	: 03 Apr 95 01:29 PM	Analysis Method	: TVH040 MT
Report Created on	: 03 Apr 95 01:53 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # 24MP-2D WATER		



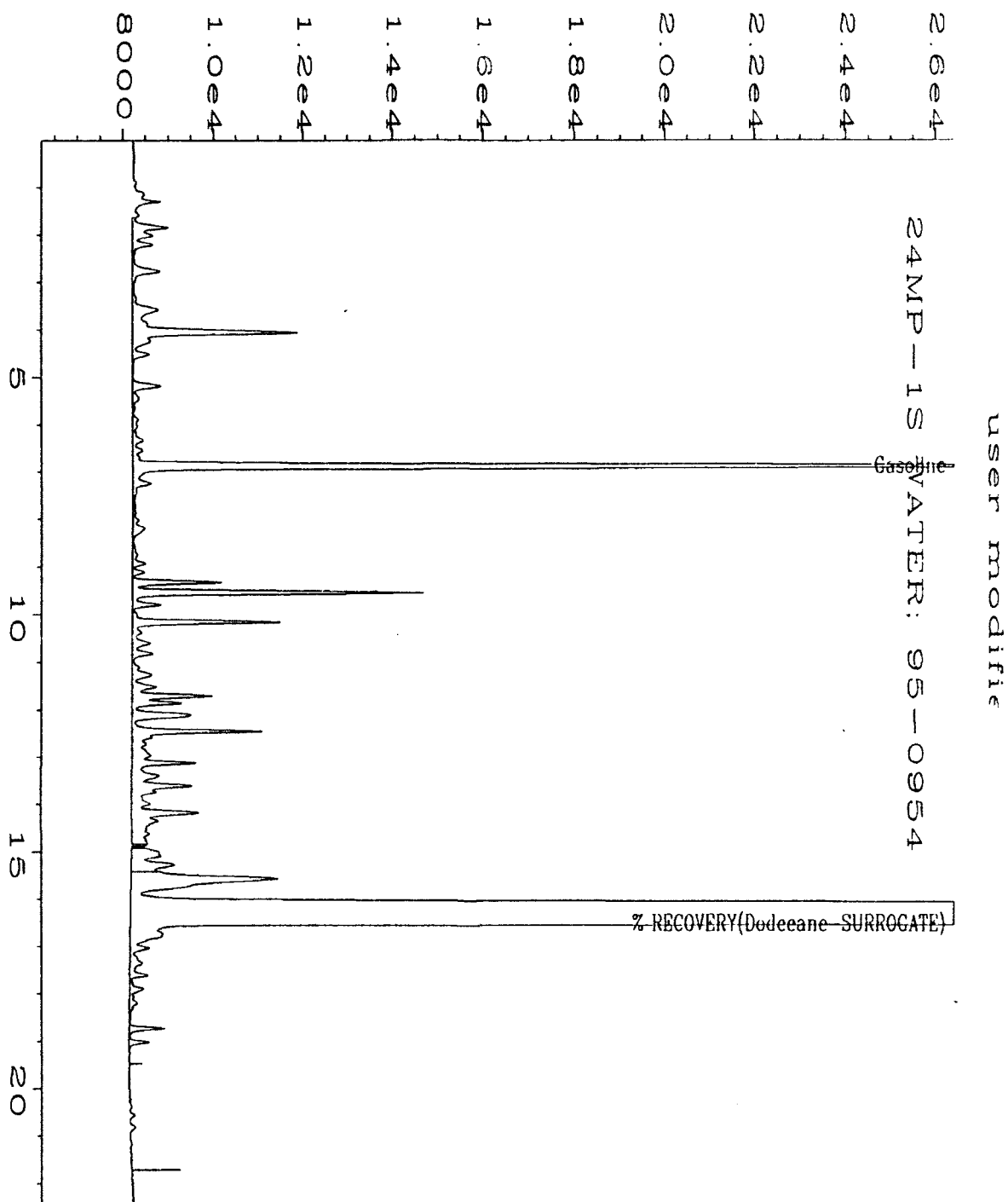
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\038F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 38
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04751 DUP	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0402.MTH
quired on	: 03 Apr 95 02:03 PM	Analysis Method	: TVH0402.MTH
Report Created on:	03 Apr 95 02:26 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		



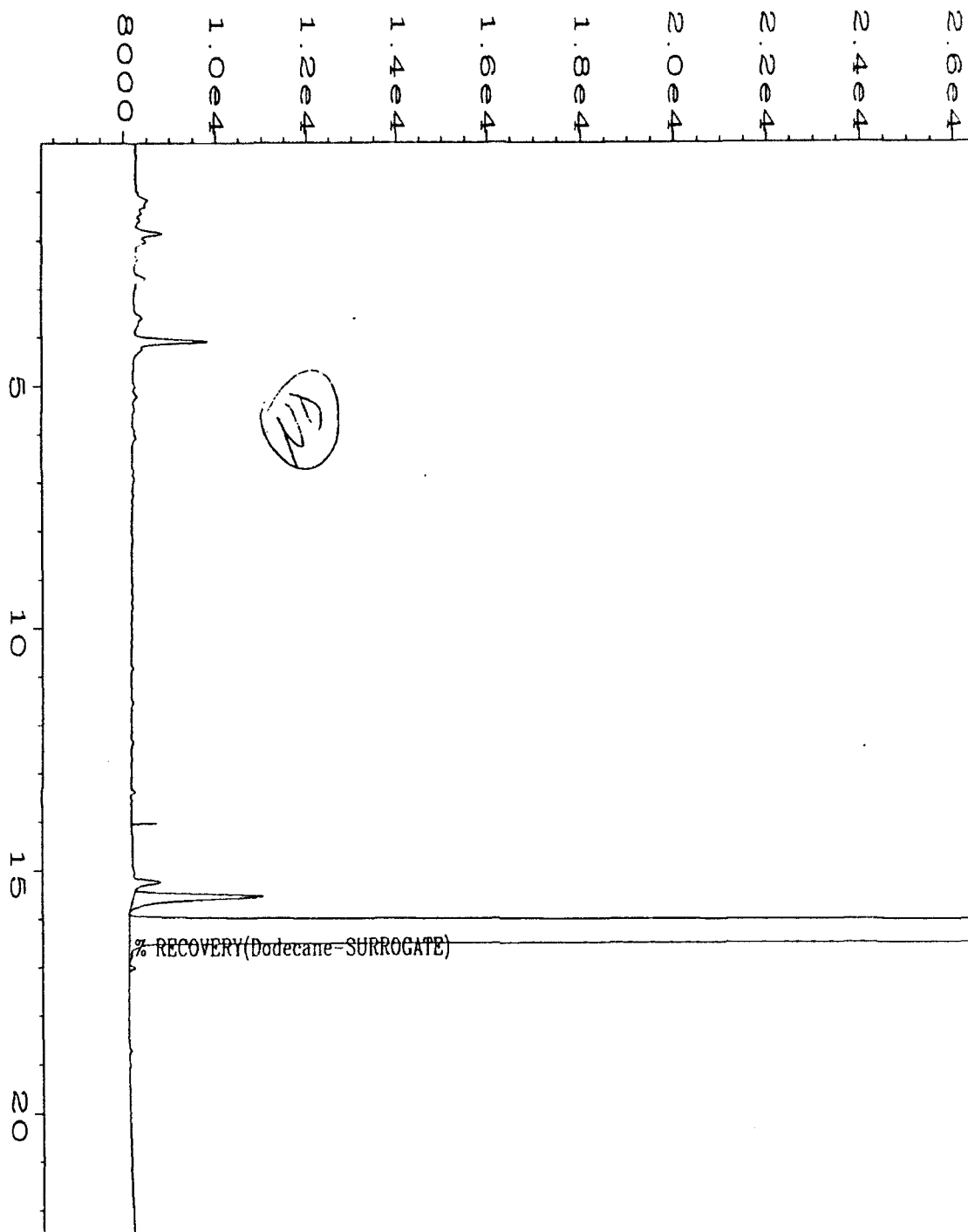
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\046F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 46
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04752;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH040 .1
Acquired on	: 03 Apr 95 06:35 PM	Analysis Method	: TVH040 .1
Report Created on:	03 Apr 95 06:58 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # 24MP-2S WATER		



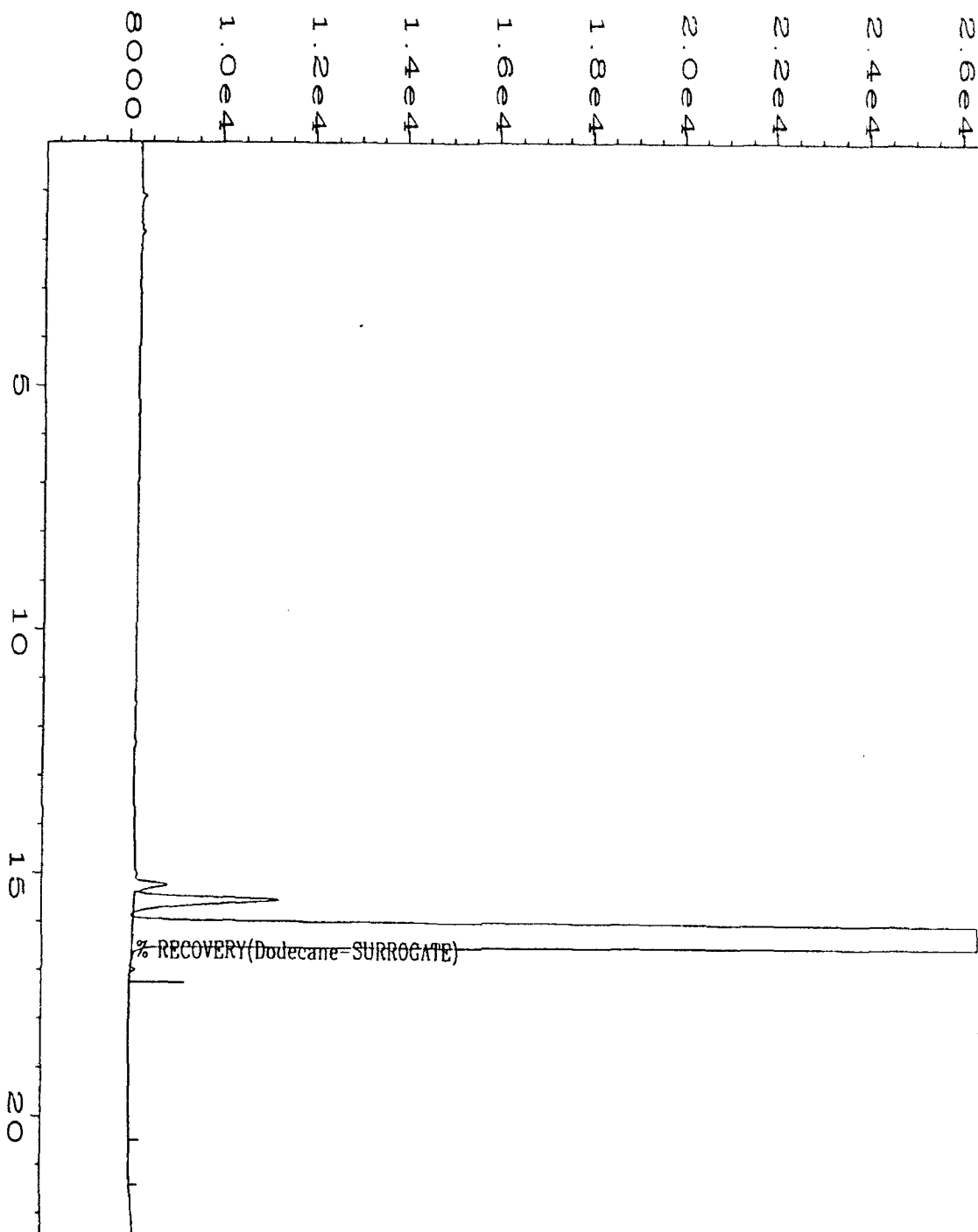
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\043F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 43
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04753;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402.MTH
Required on	: 03 Apr 95 04:53 PM	Analysis Method	: TVH0402.MTH
Report Created on	: 03 Apr 95 05:16 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # 24MP-1D WATER		



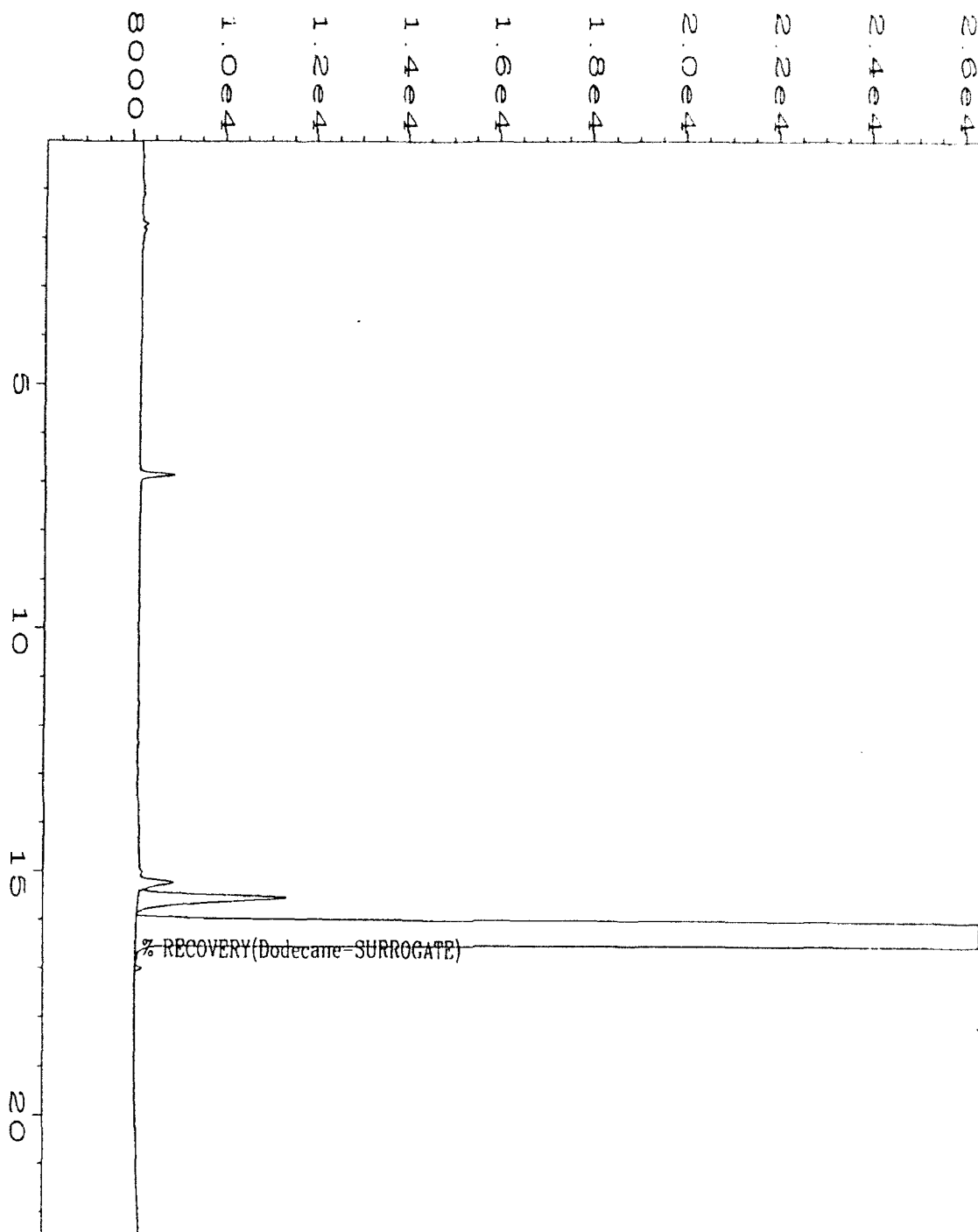
Data File Name	: C:\HPCHEM\1\DATA\TVH0402\047F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 47
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04754;5;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH040 T
Acquired on	: 03 Apr 95 07:09 PM	Analysis Method	: TVH040.MT
Report Created on:	: 07 Apr 95 06:53 PM	Sample Amount	: 0
Last Recalib on	: 02 APR 95 01:38 PM	ISTD Amount	:
Multiplier	: <i>X 5 mpm</i>		



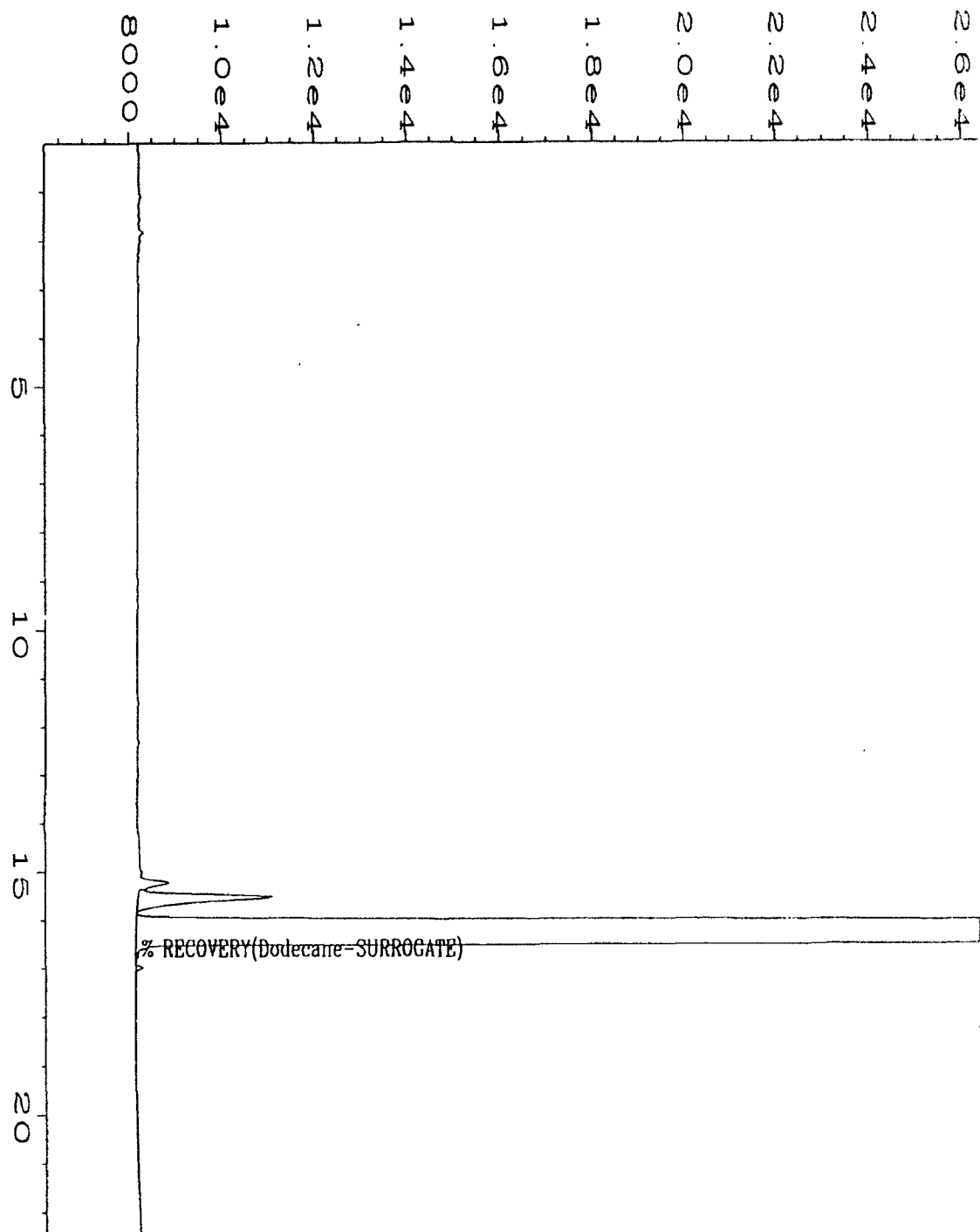
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\048F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 48
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04755;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0402.MTH
quired on	: 03 Apr 95 07:44 PM	Analysis Method	: TVH0402.MTH
Report Created on:	03 Apr 95 08:14 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # MD24-2 WATER		



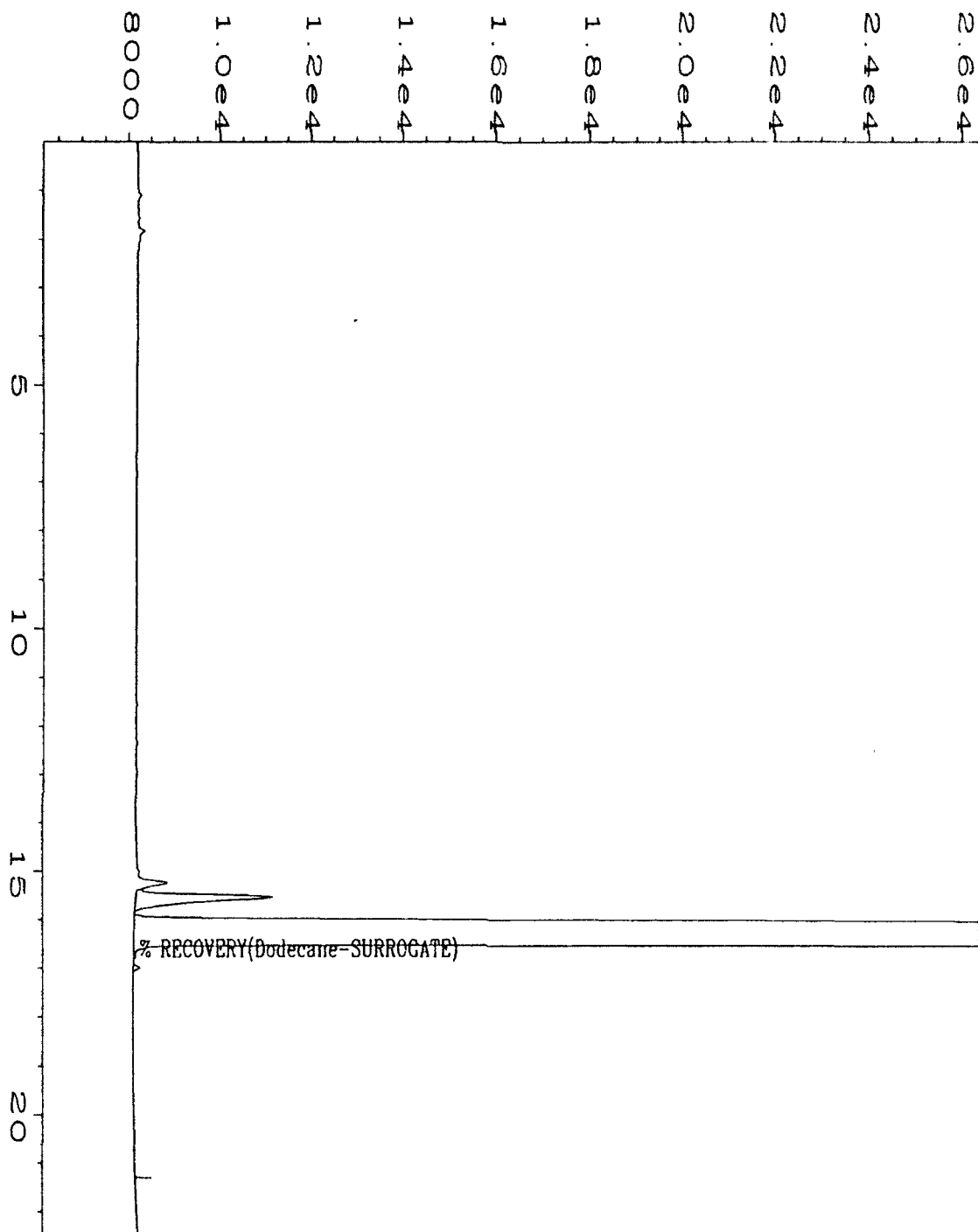
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\049F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 49
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04756;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402...FI
Acquired on	: 03 Apr 95 08:18 PM	Analysis Method	: TVH0402...FI
Report Created on:	03 Apr 95 08:41 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # MD24-5 WATER		



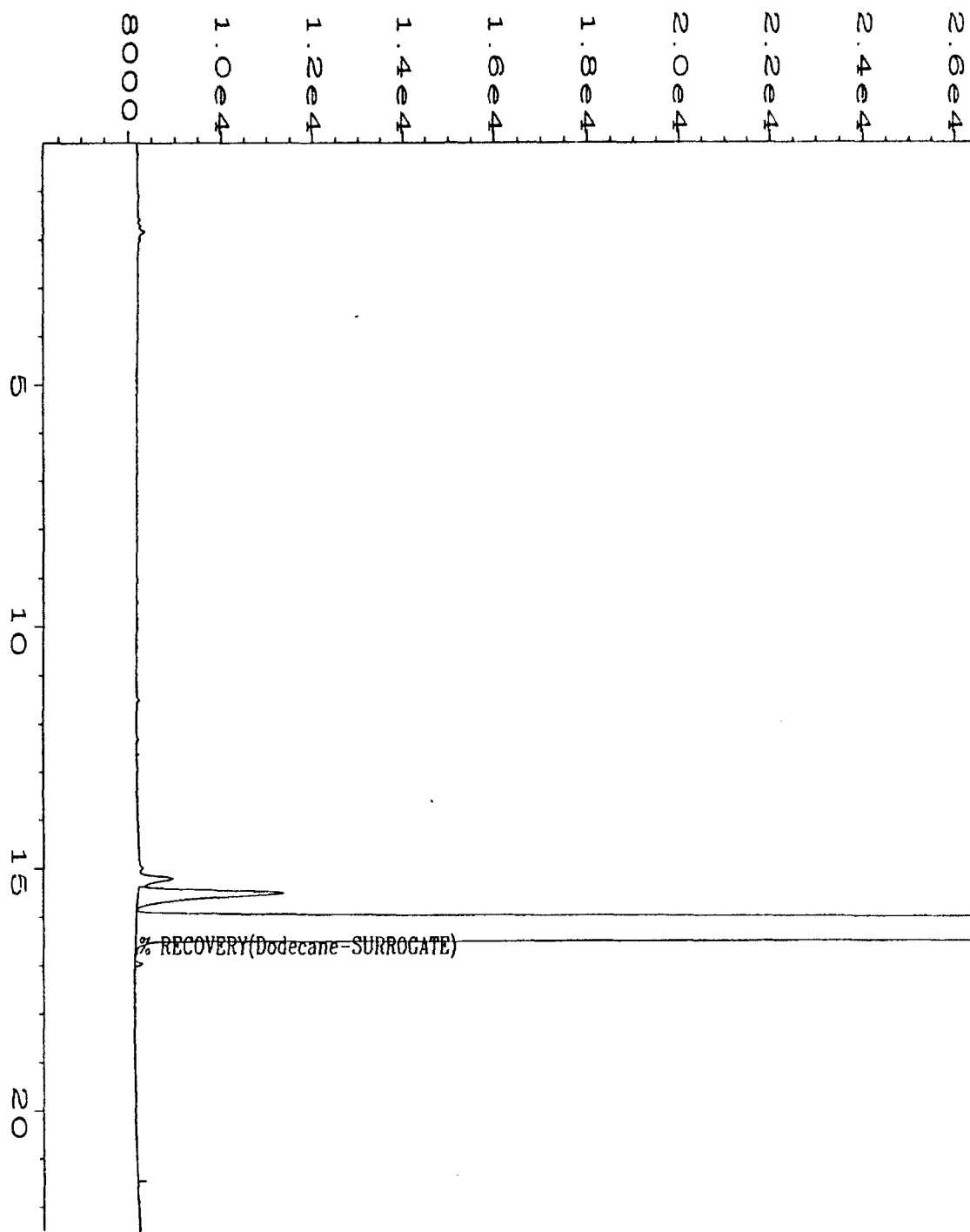
Data File Name	: C:\HPCHEM\1\DATA\tvh0402\052F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 52
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04757;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402.MTH
Acquired on	: 03 Apr 95 10:00 PM	Analysis Method	: TVH0402.MTH
Report Created on	: 03 Apr 95 10:23 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # 24MP-4S WATER		



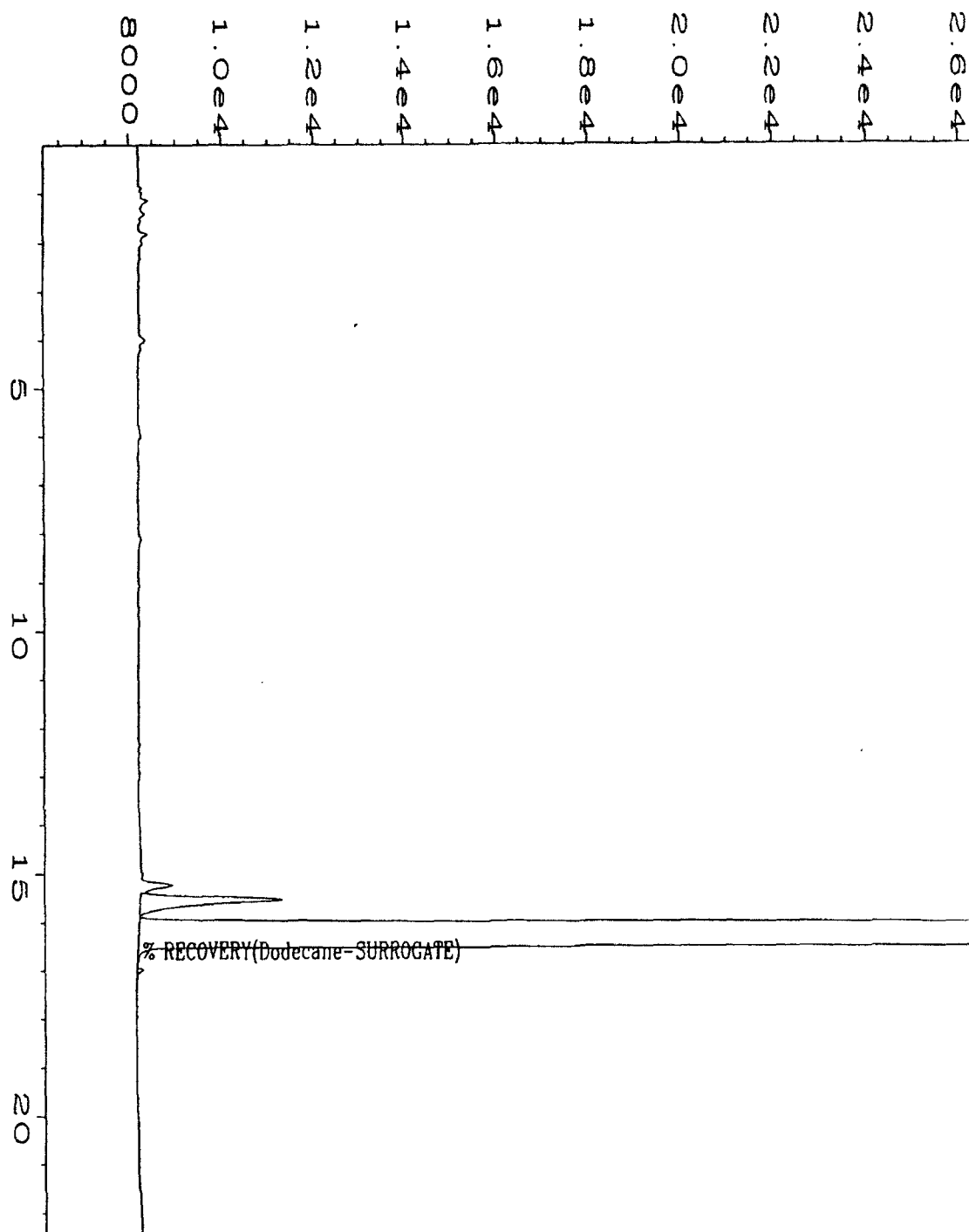
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Operator	: S.W. Tyson	Vial Number	: 53
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04758;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH040 IT
Acquired on	: 03 Apr 95 10:34 PM	Analysis Method	: TVH040. IT
Report Created on:	03 Apr 95 10:57 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # MD24-4 WATER		



Data File Name	: C:\HPCHEM\1\DATA\tvh0402\054F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 54
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04759;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402.MTH
quired on	: 03 Apr 95 11:08 PM	Analysis Method	: TVH0402.MTH
ort Created on:	: 03 Apr 95 11:31 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # MD24-41 WATER		

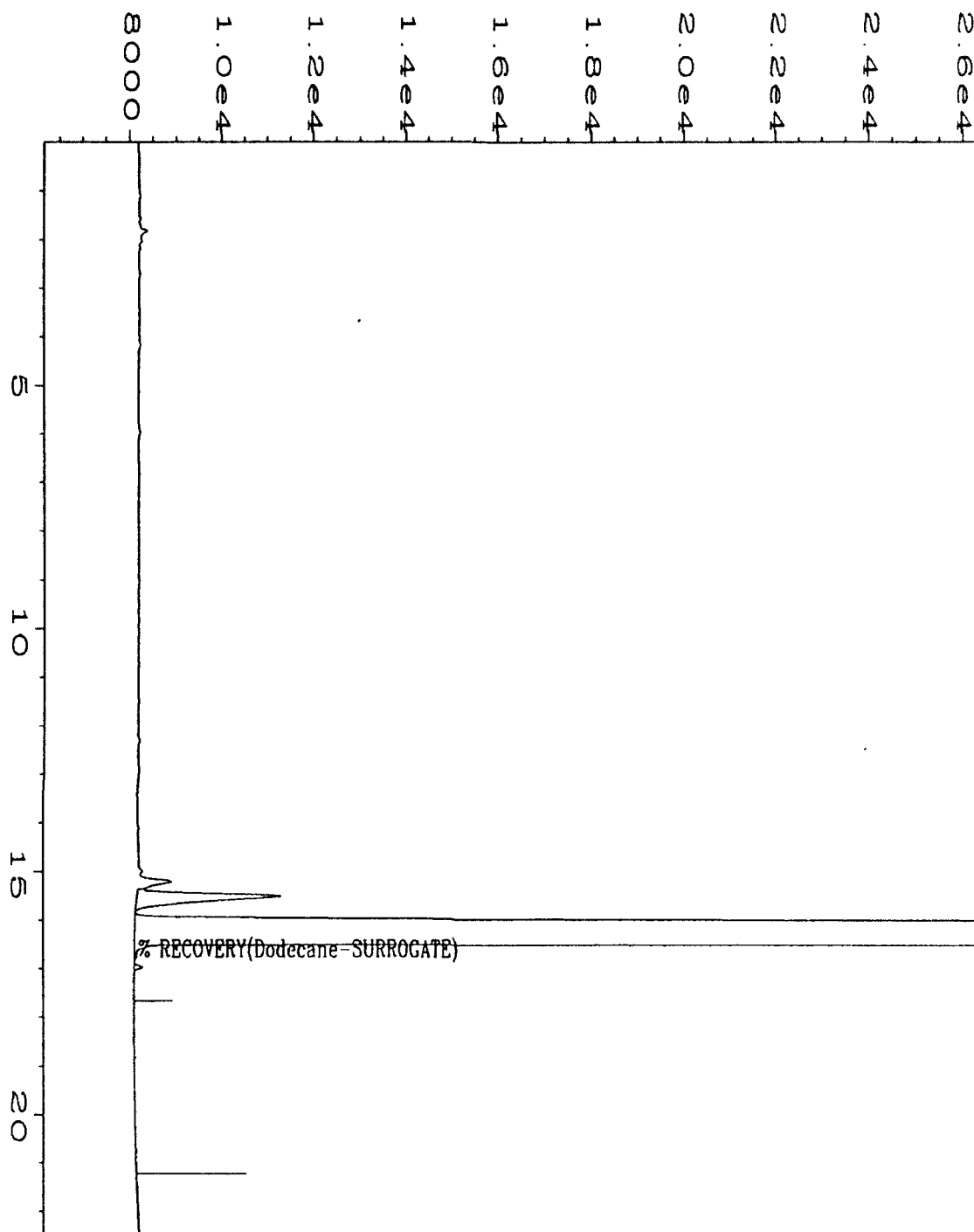


Data File Name	: C:\HPCHEM\1\DATA\tvh0402\055F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 55
Instrument	: TVI	Injection Number	: 1
Sample Name	: X04760;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH040 T
Acquired on	: 03 Apr 95 11:42 PM	Analysis Method	: TVH0402.MT
Report Created on:	04 Apr 95 00:05 AM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # MD24-3 WATER		

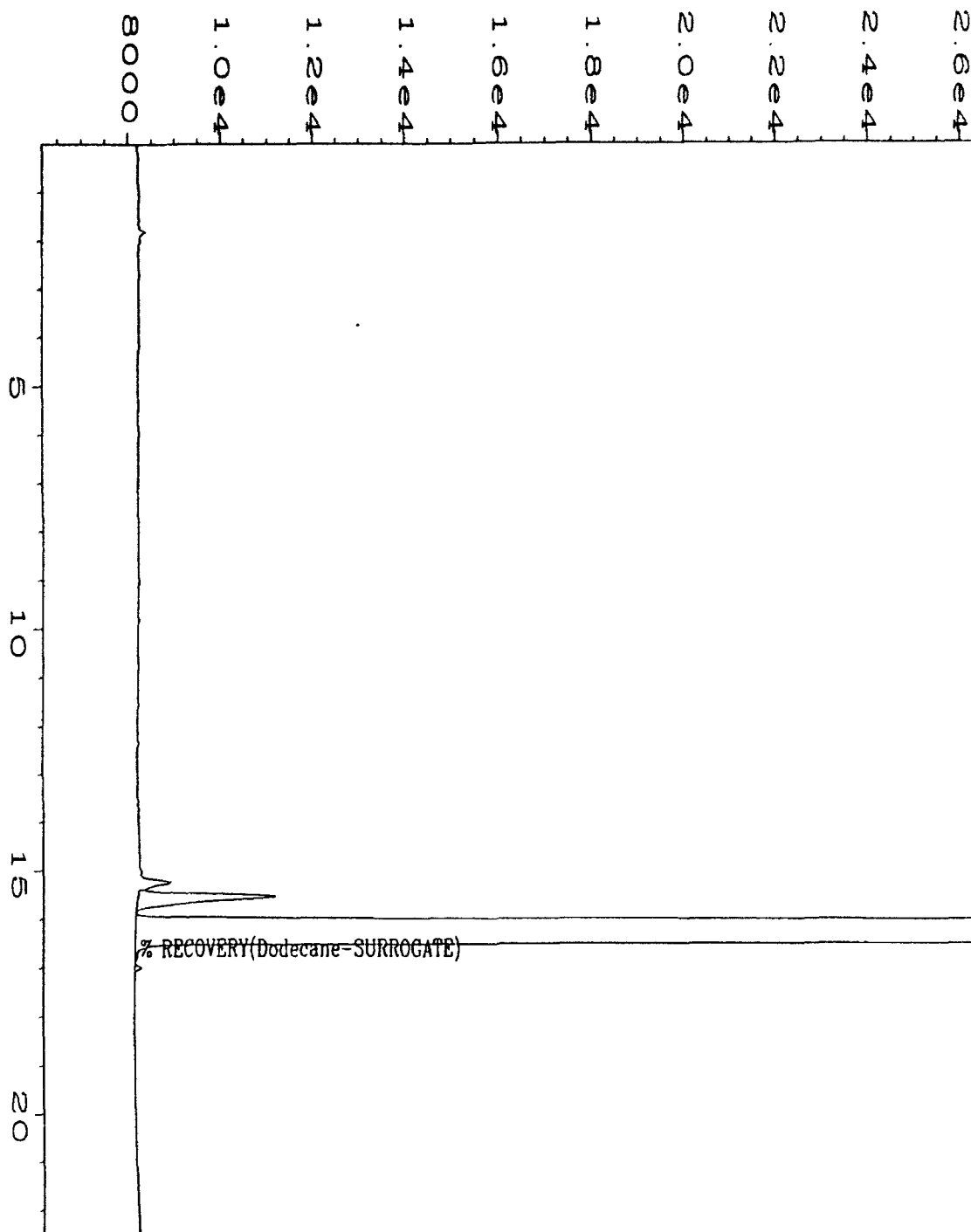


% RECOVERY(Dodecane-SURROGATE)

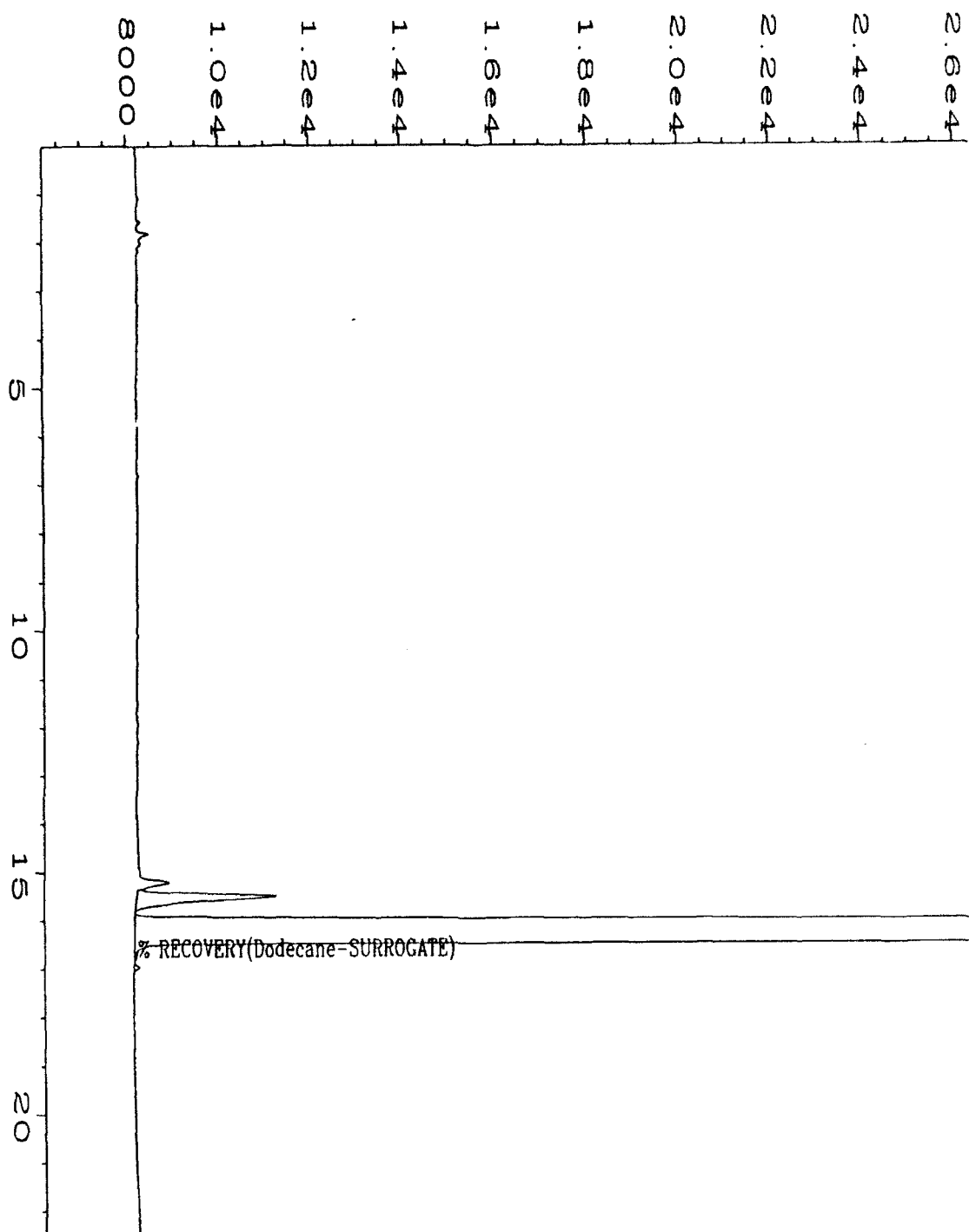
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Operator	: S.W. Tyson	Vial Number	: 56
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04761;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402.MTH
quired on	: 04 Apr 95 00:16 AM	Analysis Method	: TVH0402.MTH
Report Created on:	: 04 Apr 95 00:39 AM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # MD24-1 WATER		



Data File Name	: C:\HPCHEM\1\DATA\tvh0402\057F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 57
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04762;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH040 T
Acquired on	: 04 Apr 95 00:49 AM	Analysis Method	: TVH0402.MT
Report Created on:	04 Apr 95 01:12 AM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # 24MP-5D WATER		



Data File Name	: C:\HPCHEM\1\DATA\tvh0402\058F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 58
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04762DUP;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402.MTH
quired on	: 04 Apr 95 01:23 AM	Analysis Method	: TVH0402.MTH
ort Created on:	: 04 Apr 95 01:46 AM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # 24MP-5D WATER		



Data File Name	: C:\HPCHEM\1\DATA\tvh0402\059F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 59
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04770;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH040 T
Acquired on	: 04 Apr 95 01:57 AM	Analysis Method	: TVH040...F
Report Created on:	04 Apr 95 02:20 AM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # 24SS-2 SOIL		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS040295 Matrix : WATER
Date Prepared : 4/2/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/2/95
Sequence Number : TVH8

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	2.00	2.18	109%	70%-130%

QUALIFIERS

U = TVH analyzed for but not detected.

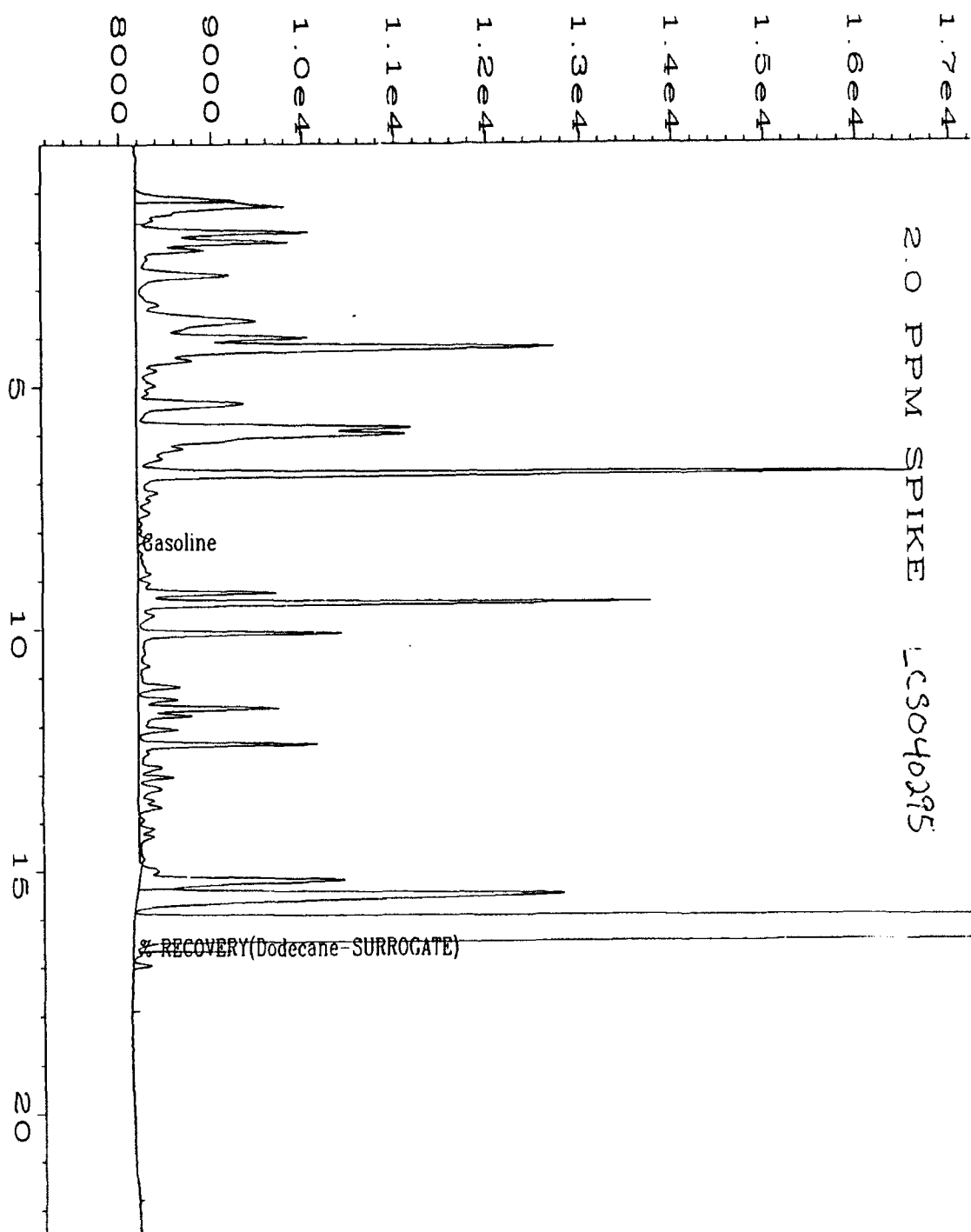
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0402\008F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS040295	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0401 TH
Acquired on	: 02 Apr 95 02:20 PM	Analysis Method	: TVH0402.MT
Report Created on:	07 Apr 95 06:45 PM	Sample Amount	: 0
Last Recalib on	: 02 APR 95 01:38 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
JET FUEL

Date Sampled : 3/23/95 Client Project Number : 722450.2102/MACDILL
Date Received : 3/24/95 Lab Project Number : 95-0954
Date Prepared : 3/29/95 Matrix : Soil
Date Analyzed : 3/31/95-4/1/95 Method Number : 3500/Mod. 8015

Evergreen Sample #	Client Sample #	OTP Surrogate % Recovery	TEH* JET FUEL mg/Kg	RL* mg/Kg
SB032995	SOIL METHOD BLANK	104%	U	10
X04770	24SS-2	112%	64#	14
X04770 DUP	24SS-2	111%	43#	14

* = Based on dry weight.

= Does not match jet fuel pattern.

QUALIFIERS

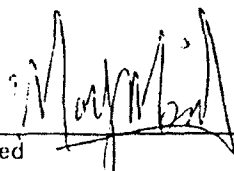
U = TEH analyzed for but not detected.

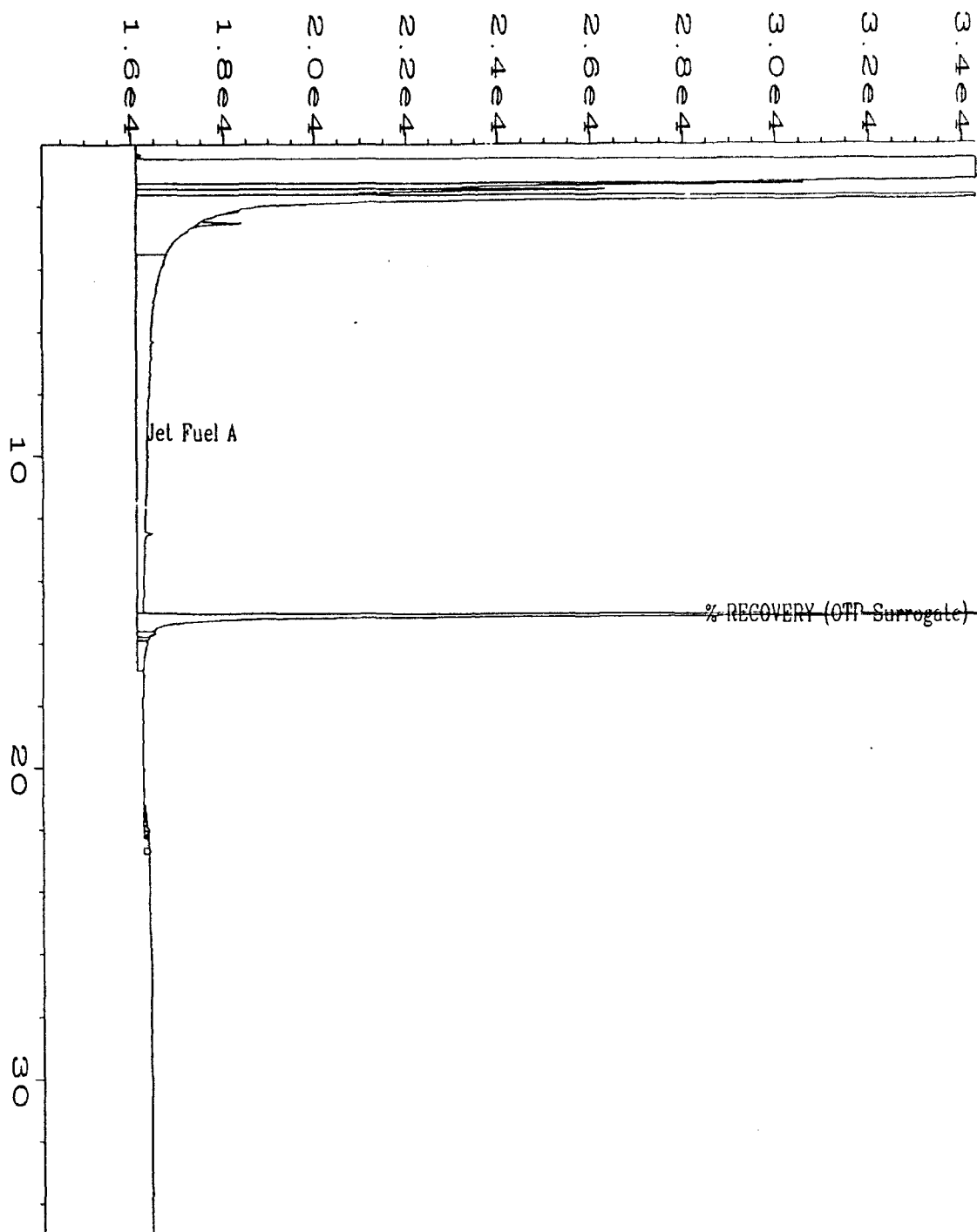
B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

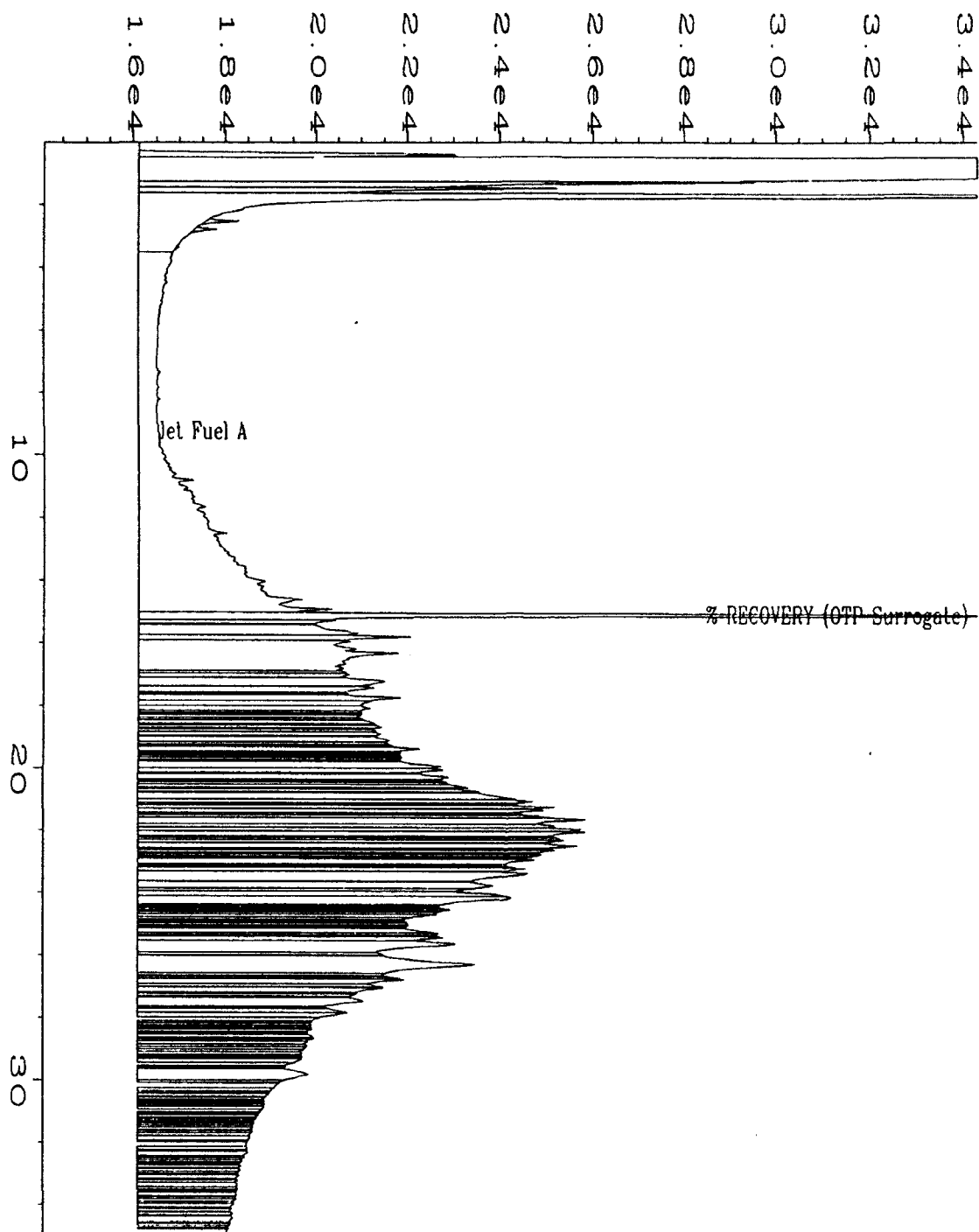
RL = Reporting Limit


Analyst

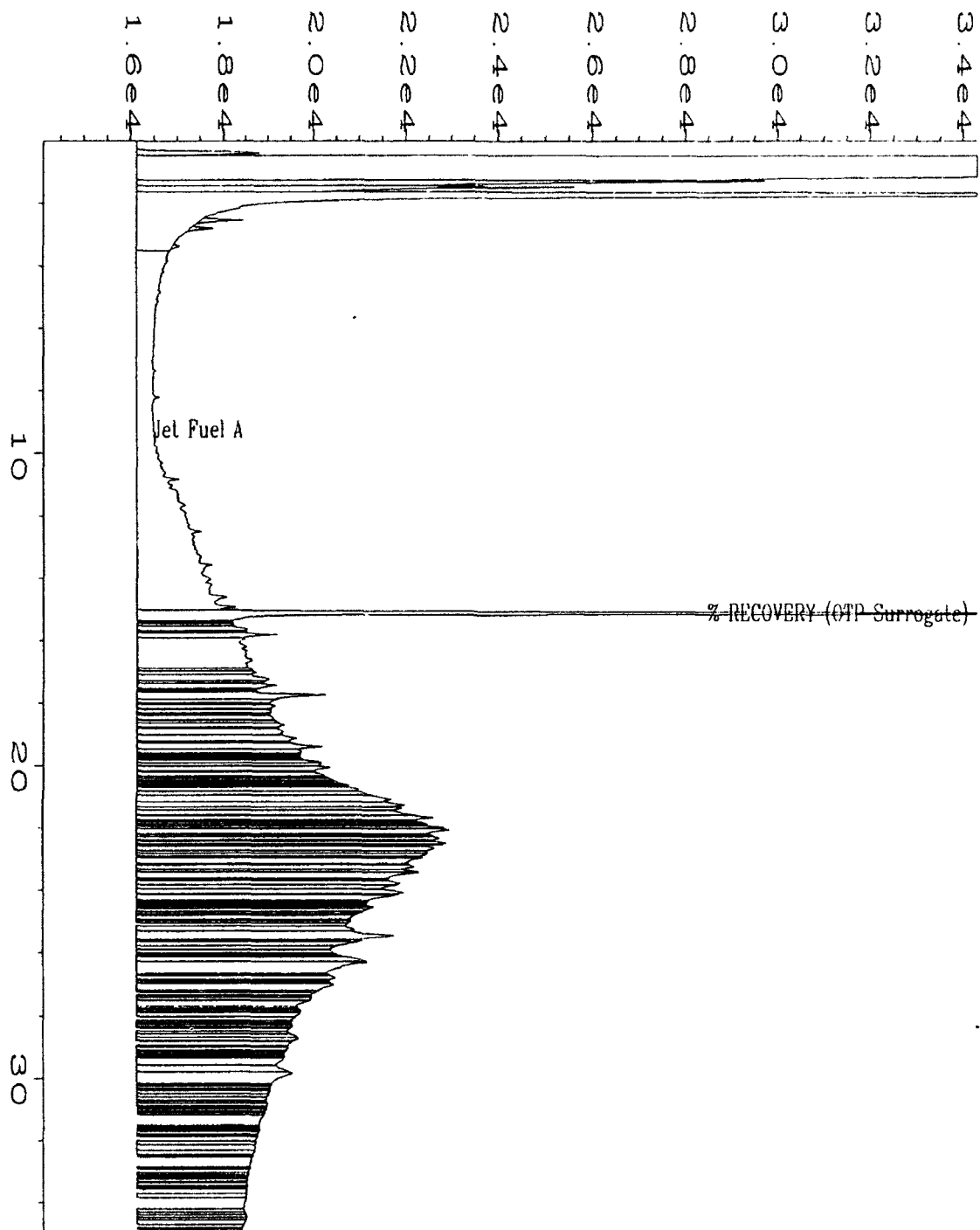

Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0331\009R0801.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TEH	Injection Number	: 1
Sample Name	: SB032995	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	JET0331 TH
Acquired on	: 31 Mar 95 05:50 PM	Analysis Method	: JET0331 TH
Report Created on:	31 Mar 95 06:26 PM	Sample Amount	: 0
Last Recalib on	: 31 Mar 95 02:18 PM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\2\DATA\JET0331\011R0801.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 11
Instrument	: TEH	Injection Number	: 1
Sample Name	: X04770 DF=1, 30	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	: JET0331.MTH
quired on	: 31 Mar 95 07:29 PM	Analysis Method	: JET0331.MTH
ort Created on:	: 31 Mar 95 08:04 PM	Sample Amount	: 0
Last Recalib on	: 31 Mar 95 02:18 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0954 CLIENT # 24SS-2 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0331\014R0801.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 14
Instrument	: TEH	Injection Number	: 1
Sample Name	: X04770 DUP	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	: JET0331.T
Acquired on	: 31 Mar 95 09:57 PM	Analysis Method	: JET0331.T
Report Created on:	: 31 Mar 95 10:32 PM	Sample Amount	: 0
Last Recalib on	: 31 Mar 95 02:18 PM	ISTD Amount	:
Multiplier	: 1		

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(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number : LCS032995 Matrix : SOIL
Date Prepared : 3/29/95 Method Number : 3500/MOD.8015
Date Analyzed : 3/31/95
Sequence Number : JET10

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
JET FUEL	1000	1080	108%	70%-130%

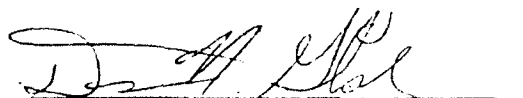
QUALIFIERS

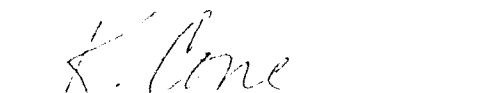
U = TEH analyzed for but not detected.

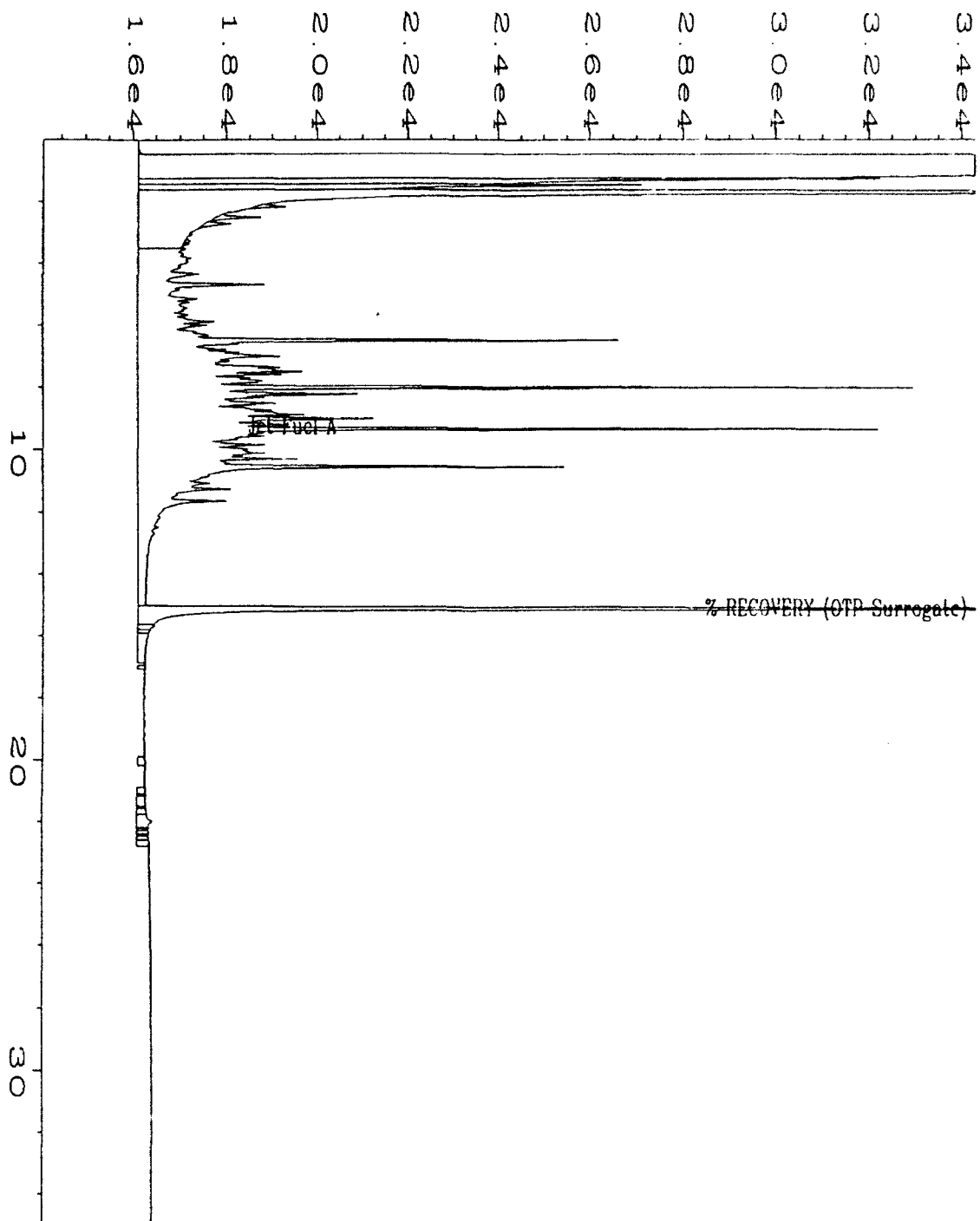
B = TEH found in blank as well as sample (blank data should be compared)

E = Extrapolated value.

NA = Not Available.


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Data File Name	: C:\HPCHEM\2\DATA\JET0331\010R0801.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TEH	Injection Number	: 1
Sample Name	: LCS032995	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	JET0331
Acquired on	: 31 Mar 95 06:40 PM	Analysis Method	: JET0331
Report Created on:	31 Mar 95 07:15 PM	Sample Amount	: 0
Last Recalib on	: 31 Mar 95 02:18 PM	ISTD Amount	:
Multiplier	: 1		

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Anions

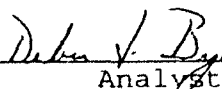
Date Sampled : 3/22,23/95 Client Project ID. : 722450.21020
Date Received : 3/24/95 Lab Project No. : 95-0954
Date Prepared : 3/24/95 Method : EPA 300.0
Date Analyzed : 3/24/95 Matrix : Water
Detection Limit : 0.250 mg/L

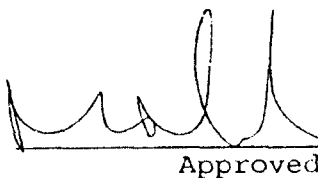
Evergreen Sample #	Client Sample ID	Chloride (mg/L)
X04750	MD24-8	6.55
X04750	MD24-8	6.59
Dup	Dup	
X04751	24MP-2D	291
X04752	24MP-2S	15.6
X04753	24MP-1D	454
X04754	24MP-1S	16.2
X04755	MD24-2	262
X04756	MD24-5	2.94
X04757	24MP-4S	30.6
X04758	MD24-4	320
X04759	MD24-4f	326
X04760	MD24-3	207
X04761	MD24-1	79.8
X04762	24MP-5D	354
Method blank 3-24-95		<0.250

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04762	24MP-5D	10.0	354	46.0*	106
	Matrix Spike				
X04762	24MP-5D	10.0	354	46.0*	106
	Matrix Spike Dup				
	MS/MSD RPD				0
X04750/X04750 dup	RPD				0.609

* Result based on a 10x dilution factor.


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Anions

Date Sampled : 3/22,23/95
Date Received : 3/24/95
Date Prepared : 3/24/95
Date Analyzed : 3/24/95

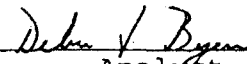
722450.21020
Client Project ID. : /MacDill AFB
Lab Project No. : 95-0954
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.076 mg/L

Evergreen Sample #	Client Sample ID	Nitrite-N (mg/L)
X04750	MD24-8	<0.076
X04750	MD24-8	<0.076
Dup	Dup	
X04751	24MP-2D	<0.760*
X04752	24MP-2S	<0.076
X04753	24MP-1D	<1.52*
X04754	24MP-1S	<0.076
X04755	MD24-2	<0.760*
X04756	MD24-5	<0.076
X04757	24MP-4S	<0.076
X04758	MD24-4	<0.760*
X04759	MD24-4	<0.760*
X04760	MD24-3	<0.760*
X04761	MD24-1	<0.076
X04762	24MP-5D	<0.760*
Method blank 3-24-95		<0.076

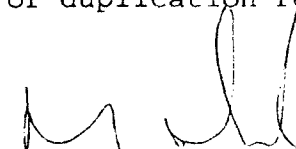
Quality Assurance **

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04762	24MP-5D	10.0	<0.076	9.49	94.9
	Matrix Spike				
X04762	24MP-5D	10.0	<0.076	9.17	96.7
	Matrix Spike Dup				
	MS/MSD RPD				1.88
X04750/X04750	dup RPD				NC

* = Increased detection limit due to matrix interference.
** = Quality assurance results reported as Nitrite (NO₂)
NC = Not calculated because sample and/or duplication results
below detection limit.



Analyst



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Anions

Date Sampled : 3/22,23/95 Client Project ID. : 722450.21020
Date Received : 3/24/95 Lab Project No. : 95-0954
Date Prepared : 3/24/95 Method : EPA 300.0
Date Analyzed : 3/24/95 Matrix : Water
Detection Limit : 0.056 mg/L

Evergreen Sample #	Client Sample ID	Nitrate-N (mg/L)
X04750	MD24-8	<0.056
X04750	MD24-8	<0.056
Dup	Dup	
X04751	24MP-2D	<0.056
X04752	24MP-2S	<0.056
X04753	24MP-1D	<0.056
X04754	24MP-1S	<0.056
X04755	MD24-2	<0.056
X04756	MD24-5	<0.056
X04757	24MP-4S	<0.056
X04758	MD24-4	<0.056
X04759	MD24-41	<0.056
X04760	MD24-3	<0.056
X04761	MD24-1	<0.056
X04762	24MP-5D	<0.056
Method blank 3-24-95		<0.056

Quality Assurance **

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04762	24MP-5D Matrix Spike	10.0	<0.250	9.00	90.0
X04762	24MP-5D Matrix Spike Dup	10.0	<0.250	9.01	90.1
	MS/MSD RPD				0.111
X04750/X04750 dup	RPD				NC

** = Quality assurance results reported as Nitrate (NO₃)
NC = Not calculated because sample and/or duplication results
below detection limit.

Debra V. Byers
Analyst

[Signature]
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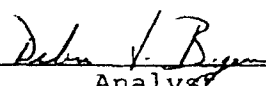
Anions

Date Sampled : 3/22,23/95 Client Project ID. : 722450.21020
Date Received : 3/24/95 Lab Project No. : 95-0954
Date Prepared : 3/24/95 Method : EPA 300.0
Date Analyzed : 3/24/95 Matrix : Water
Detection Limit : 0.250 mg/L

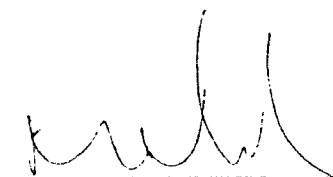
Evergreen Sample #	Client Sample ID	Sulfate (mg/L)
X04750	MD24-8	1.39
X04750	MD24-8	1.43
Dup	Dup	
X04751	24MP-2D	10.5
X04752	24MP-2S	22.3
X04753	24MP-1D	2.00
X04754	24MP-1S	77.0
X04755	MD24-2	6.78
X04756	MD24-5	12.0
X04757	24MP-4S	23.5
X04758	MD24-4	11.7
X04759	MD24-4i	11.7
X04760	MD24-3	18.4
X04761	MD24-1	7.16
X04762	24MP-5D	17.4
Method blank 3-24-95		<0.250

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X04762	24MP-5D Matrix Spike	10.0	17.4	26.9	95.3
X04762	24MP-5D Matrix Spike Dup	10.0	17.4	27.2	97.7
	MS/MSD RPD				2.49
X04750/X04750 dup	RPD				2.84



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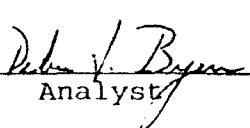
Miscellaneous Analyses

Date Sampled : 3/22/95 Client Project ID. : 722450.21020
Date Received : 3/24/95 Lab Project No. : /MacDill AFB
Date Prepared : 3/28/95 Detection Limit : 95-0954
Date Analyzed : 3/28/95 Method : 5.00 mgCaCO₃/L
EPA 310.1

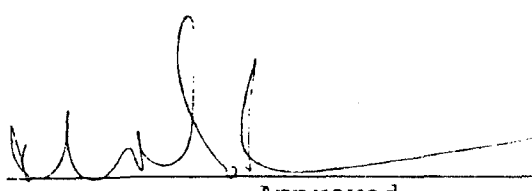
Evergreen Sample #	Client Sample ID	Matrix	Total Alkalinity (mgCaCO ₃ /L)
X04750	MD24-8	Water	206
X04750 Dup	MD24-8 Dup	Water	205
Method Blank (3/28/95)			<5.00

Quality Assurance

	True Value (mgCaCO ₃ /L)	Result (mgCaCO ₃ /L)	% Recovery
APG Minerals Reference Lot 13862	11.8	10.6	89.8
X04750/X04750 Dup RPD			0.486



Analyst



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0954tm.4

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

Total Organic Carbon

Date Sampled : 3/23/95 Client Project ID. : 722450.21020
Date Received : 3/24/95 Lab Project No. : /MacDill AFB
Date Prepared : 3/31/95 Method : 95-0954
Date Analyzed : 3/31/95 Matrix : EPA 415.1
Detection Limit : Water
Detection Limit : 1.00 mg C/L

Evergreen Sample #	Client Sample ID	mg C/Liter
X04756	MD24-5	5.52
X04760	MD24-3	34.6
<u>95-1009</u>		
X04936	56MP-3S	10.2
X04936 Dup	56MP-3S dup	10.2
Method Blank (3/31/95)		<1.00

Quality Assurance

		Spike Amount (mg C/L)	Sample Result (mg C/L)	Spike Result (mg C/L)	% Recovery
<u>95-1009</u>	Matrix spike	10.0	10.2	20.6	103
X04936	56MP-3S				
X04936	Matrix spike	10.0	10.2	20.7	104
	Dup				
	56MP-3S				
	MS/MSD RPD				1.15
X04936/X04936 Dup	RPD				0.096

Debra J. Ryan
Analyst

[Signature]
Approved



CASE NARRATIVE

Evergreen Analytical Laboratory, (EAL) Project #: 95-0915

Parsons Engineering Science, Inc. (PES) Project: MacDill AFB
(722450.21020)

Sample Receipt

On March 22, 1995, 13 water and 16 soil samples were received in good condition at Evergreen Analytical Laboratory. One trip blank was received with instructions to analyze for BTEX, TVH, Anions and Alkalinity. EAL was instructed by Leigh Benson of PES to analyze all trip blanks for BTEX only by telephone on March 22, 1995. Matrix spike (MS) samples were submitted for analysis with no associated sample. Upon questioning, John Hicks of PES was unable to determine which samples the MSs were associated with, therefore, they were handled as normal samples.

BTEX, Soil Matrix, Method SW8020

The soil samples were analyzed for BTEX within holding times. Samples 56MP-1(8-10), 56MP-2(13-15), 56SS-1(8-10) and Matrix Spike were analyzed at a dilution factor of 5 and 56MP-5(406) at DF = 1250 and 12500 due to levels of contamination. The reporting limits were adjusted accordingly.

Sample 56MP-6(4-6) exhibited low surrogate recovery. The sample was re-run for low surrogate confirmation with similar results. Method Blank MB032895 also exhibited low surrogate recovery, therefore, please refer to the Methanol Extraction Blank MEB032895.

BTEX, Water Matrix, Method 602

The water samples were analyzed within holding times at normal concentrations. No adjustment in reporting limits was necessary.

BTEX OC SAMPLES

The following Method Blanks exhibited total xylene contamination at or around the detection limit; MB032695, MEB032895, MEB032995 and MB032995. MEB033095 was contaminated with 1,2,3-trimethylbenzene. All samples associated with contaminated blanks are flagged "B".

Six Laboratory Control Samples (LCS) were associated with this project. All spikes and surrogates are within EAL control limits.

All duplicate sets of sample RPDs were within control limits.

Page Two
Case Narrative
Parsons Engineering Science
95-0915

Total Volatile Hydrocarbons, Soil and Water Matrix, Method 8015M
All samples were analyzed for TVH within holding times. Sample 56MP-16(4-6) exhibited low surrogate recovery due to matrix interference. This was confirmed by a second analysis.

There were no other quality control anomalies to report.

Total Extractable Hydrocarbons, Soil Matrix, Method 8015M
There were no quality control anomalies to report.

General Chemistry
There were no quality control anomalies to report.

Total Organic Carbon (TOC) in Soil
TOC was analyzed by Huffman Laboratories in Golden, Colorado by analyzing for total carbon (TC) and inorganic (carbonate) carbon (CC). The difference is then calculated and reported as TOC. The reports from Huffman are included.



Patricia A. McClellan, Project Manager

Evergreen Analytical Sample Log Sheet

Project # 95-0915

Date(s) Sampled: 03/17,20,21/95 COC

Date Due: 03/27/95-UST

Date Received: 03/22/95 1015

Holding Time(s): 04/05/95-OTHERS
3/22,23-NO₂,NO₃
3/31,4/3,4-BTEX,TVH,TEH,4/3,4-ALK.

Client Project I.D. 722450.21020/MAC DILL AFB

Rush STANDARD

Client: Parsons Engineering Science, Inc.

Shipping Charges N/A

Address: 1700 Broadway Suite 900

E.A. Cooler # 422,412

Denver, CO 80290

Airbill # FEDEX 3518630791

Contact: TODD WIEDEMEIR

Custody Seal Intact? Y

Cooler X Bottles

Client P.O. 722450.21020

COC Present Y

Sample Tags Present? Y

Phone #831-8100 Fax #831-8208

Sample Tags Listed? Y

Sample(s) Sealed? Y

Special Instructions \$PLUS CHLORO BENZENE, TEMB & TMB. REPORT ALL SOILS ON A DRY WEIGHT BASIS. ANALYZE AN MS/MSD AND LAB DUPLICATE FOR THIS CLIENT.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04546A/B	24MP-5S	\$BTEX 602	W	40V	2
X04547A/B	24MP-3S	\$BTEX 602	W	40V	2
X04548A/B	24MP-3D	\$BTEX 602	W	40V	2
X04549A/B	24MP-8D	\$BTEX 602	W	40V	2
X04550A/B	24MP-8S	\$BTEX 602	W	40V	2
X04551A/B	MD24-9	\$BTEX 602	W	40V	2
X04552A/B	MD24-10A	\$BTEX 602	W	40V	2
X04553A/B	MD24-10	\$BTEX 602	W	40V	2
X04554A/B	MD24-7	\$BTEX 602	W	40V	2
X04555A/B	MD24-7(DUP)	\$BTEX 602	W	40V	2
X04559	RINSEATE BLANK	\$BTEX 602	W	40V	2
X04565	MATRIX SPIKE	\$BTEX 8020 (% MOISTURE)	S	4WM	2
X04557	56MP-1(4-6)	\$BTEX 8020,TVH	S	4WM	2
X04558	56MP-1(8-10)	\$BTEX 8020,TVH	S	4WM	2
X04560	56MP-2(6-8)	\$BTEX 8020,TVH	S	4WM	2
X04561	56MP-2(13-15)	\$BTEX 8020,TVH	S	4WM	2
X04562	56MP-3(4-6)	\$BTEX 8020,TVH	S	4WM	2
X04563	56MP-3(11-13)	\$BTEX 8020,TVH	S	4WM	2
X04564	56SS-1(8-10)	\$BTEX 8020,TVH(% MOISTURE)	S	TUBE	2

R=Sample to be returned

Route GC/MS GC 4 Metals Wet Chem 1 SxPrep 1 Acctg 1
 To SxRec C QA/QC C Sales C File Orig

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04566	56MP-5(4-6)	\$BTEX 8020,TVH	S	4WM	2
X04567	56MP-5(8-11)	\$BTEX 8020,TVH(% MOISTURE)	S	2WM	2
X04568	56MP-6(4-6)	\$BTEX 8020,TVH	S	4WM	2
X04569	56MP-6(10-11)	\$BTEX 8020,TVH(% MOISTURE)	S	TUBE	2
X04571	MATRIX SPIKE	\$BTEX 8020,TVH	S	2WM	2
X04572	56MP-16(4-6)	\$BTEX 8020,TVH	S	4WM	2
X04556A/B	TRIP BLANK	\$BTEX 602	W	40V	2
X04573A	TRIP BLANK	\$BTEX 602	W	40V	2
X04546C/D	24MP-5S	TVH	W	40V	2
X04547C/D	24MP-3S	TVH	W	40V	2
X04548C/D	24MP-3D	TVH	W	40V	2
X04549C/D	24MP-8D	TVH	W	40V	2
X04550C/D	24MP-8S	TVH	W	40V	2
X04551C/D	MD24-9	TVH	W	40V	2
X04552C/D	MD24-10A	TVH	W	40V	2
X04553C/D	MD24-10	TVH	W	40V	2
X04554C/D	MD24-7	TVH	W	40V	2
X04555C/D	MD24-7 (DUP)	TVH	W	40V	2
X04557	56MP-1(4-6)	TEH	S	2WM	CL3
X04558	56MP-1(8-10)	TEH	S	2WM	CL3
X04560	56MP-2(6-8)	TEH	S	2WM	CL3
X04561	56MP-2(13-15)	TEH	S	2WM	CL3
X04562	56MP-3(4-6)	TEH	S	2WM	CL3
X04566	56MP-5(4-6)	TEH	S	2WM	CL3
X04568	56MP-6(4-6)	TEH	S	2WM	CL3
X04571	MATRIX SPIKE	TEH	S	2WM	CL3
X04572	56MP-16(4-6)	TEH	S	2WM	CL3
X04557	56MP-1(4-6)	% MOISTURE	S	2WM	CL3
X04558	56MP-1(8-10)	% MOISTURE	S	2WM	CL3
X04560	56MP-2(6-8)	% MOISTURE	S	2WM	CL3
X04561	56MP-2(13-15)	% MOISTURE	S	2WM	CL3
X04562	56MP-3(4-6)	% MOISTURE	S	2WM	CL3
X04563	56MP-3(11-13)	% MOISTURE	S	2WM	CL3
X04566	56MP-5(4-6)	% MOISTURE	S	2WM	CL3
X04568	56MP-6(4-6)	% MOISTURE	S	2WM	CL3
X04571	MATRIX SPIKE	% MOISTURE	S	2WM	CL3
X04572	56MP-16(4-6)	% MOISTURE	S	2WM	CL3

Page 2 of 3 Pages

Project # 95-0915

R=Sample to be returned

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X04546E	24MP-5S	ALKALINITY	W	250P	CL3
X 47E	24MP-3S	ALKALINITY	W	250P	CL3
X04548E	24MP-3D	ALKALINITY	W	250P	CL3
X04549E	24MP-8D	ALKALINITY	W	250P	CL3
X04550E	24MP-8S	ALKALINITY	W	250P	CL3
X04552E	MD24-10A	ALKALINITY	W	250P	CL3
X04553E	MD24-10	ALKALINITY	W	250P	CL3
X04546F	24MP-5S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04547F	24MP-3S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04548F	24MP-3D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04549F	24MP-8D	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04550F	24MP-8S	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04551E	24MP-9	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04552F	MD24-10A	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04553F	MD24-10	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04554E	MD24-7	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04555E	MD24-7 (DUP)	Cl ⁻ , SO ₄ , NO ₂ , NO ₃	W	125P	CL3
X04562	56MP-3 (4-6)	TOC	S	2WM	OUT
X 68	56MP-6 (4-6)	TOC	S	2WM	OUT
X04570	56SS-2 (4-6)	TOC (% MOISTURE)	S	2WM	OUT
X04574	56SS-12 (4-6)	TOC (% MOISTURE)	S	2WM	OUT

Page 3 of 3 Pages

Project # 95-0915

R=Sample to be returned

COMPANY Perkins Engineering Services
ADDRESS 1700 S Broadway, Suite 900
CITY Denver STATE CO ZIP 80210
PHONE# 303-831-8100 FAX# 303-831-8100

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

PHONE# 303-8831-8100 FAX# 303-8831-8126

Sampler Name:

signature) Mark Jessely
print) MARK JESSELY

Evergreen Analytical Cooler No. 422

Cooler Received

Please PRINT

all information:

CLIENT
SAMPLE
IDENTIFICATION

[illegible]

24MP-5S	3/20/95	08:50
24MP-3S	3/20/95	11:25
24MP-3D	3/20/95	12:20
24MP-8D	3/20/95	13:55
24MP-8S	3/20/95	15:10
M024-9	3/20/95	16:05
M024-10A	3/21/95	10:00
M024 1 -1D	3/21/95	10:45
M024-7	3/21/95	11:45
M024-7 (DWP)	3/21/95	11:45

空

DD:

Instructions: All samples placed in IEE

Please answer the following questions, Among

Relinquished by: (S)	Date/Time	Received by: (Signature)
----------------------	-----------	--------------------------

Date/Time

ruished by: (Signature)

Date/Time

Received by: (Signature)

Date/Time: _____

1847

56/12/3

17-11 EA

10

Top (in m)

10/09

[illegible]

Evergreen Analytical Inc.

4030 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Evergreen Engineering Science
ADDRESS 1700 Brownway, Suite 400
CITY Denver STATE CO ZIP 80240
PHONE# 303-831-8100 FAX# 303-831-8208

Sampler Name:

(signature) Mike Vessely
(print) Mike Vessely

Evergreen Analytical Cooler No. 422

Cooler Received

Please PRINT

all information:

CLIENT

SAMPLE

IDENTIFICATION

DATE

SAMPLED

TIME

TRIP BLANK

3/2/95

1:30

EAL

Project # 0915

Custodian

EAL Sample No.

X04556

ANALYSIS REQUESTED

MATRIX

EAL use only
Do not write
in shaded area

No. of Containers
Water-Drinking/Discharge/Ground
(circle)
Soil / Solid
Oil / Sludge

TCLP VOA/BNA/Pest/Herb/Metals
(circle)
VOA 8260/624/524.2 (circle)
BNA 8270/625 (circle)
Pesticides 8080/608 (circle)
Pest/PCBs 8080/608/508 (circle)
Herbicides 8150/515 (circle)
PCB Screen

BTEX 8020/602 (circle)/MTBE (circle)
and TOL & XYL & ME
TRPH 418 / Oil & Grease 413.1 (circle)
TRPH 8015mod. (Gasoline)
TEPH 8015mod. (Diesel)

Total Metals-DW / NPDES / SWB46
(circle & list metals below)
Dissolved Metals - DW / SWB46
(circle & list metals below)
AICL 100.1 (circle)
CL 100.2 (circle) / 100.1 (circle)

HT:

DD:

Location 2, C, L, I

Container Size

Instructions:

Please See

TRIP BLANK FOR BTEX ONLY / LEIGH RIVER

Relinquished by: (Signature)

Mike Vessely

Date/Time

3/2/95

Received by: (Signature)

Feo Ex

Date/Time

Feo Ex

Relinquished by: (Signature)

Feo Ex

Date/Time

Feo Ex

Received by: (Signature)

Feo Ex

Date/Time

Feo Ex

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 1700 Broadway
CITY DENVER STATE CO ZIP 80202
PHONE 323 831 8100 FAX #
SAMPLER NAME Kyle L. Carrum
(signature)
(print) Kyle L. Carrum
Evergreen Analytical Cooler No. 112
Cooler Received

CLIENT CONTACT (print) John Hicks
PROJECT I.D. MACD-01
EAL QUOTE # 722450-2102
TURNAROUND REQUIRED*
*expedited turnaround subject to additional fee

Y N
RESULTS

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	ANALYSIS REQUESTED													EAL Sample No.							
			No. of Containers	Water/Drinking/Discharge/Ground (circle)	Soil / Solid (circle)	Oil / Sludge (circle)	TCLP VOC/BNA/Pest/Herb/Metals (circle)	VOC 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TPH 418.1/Oil & Grease 413.1 (circle)		TPH B015mod. (Gasoline)	TEPH B015mod. (Diesel)	Total Metals-DW / NPDES / SWB46 (circle & list metals below)	Dissolved Metals - DW / SWB46 (circle & list metals below)	TOC	Moisture	
56MP-1(4-6)	3-17-95	0915	3		X																		X04557
56MP-1(5-10)	3-17-95		3		X																		58
Rinseate Bleat	3-17-95	0130	1	X																			54410V
56MP-2(6-10)	3-17-95	1110	3		X																		60
56MP-2(11-13)	3-17-95	1145	3		X																		61
56MP-3(4-6)	3-17-95	1415	3		X																		62
56MP-3(11-13)	3-17-95	1600	3		X																		63
56SS-1(8-10)	3-20-95	0820	1		X																		64
56MP-4(11-13)	3-17-95		1		X																		65
Water Spike	3-17-95		1		X																		
HT: 1																							
DD: 1																							
Instructions:			Location <u>2, CL3</u> Container Size <u>tubes</u> <u>240m/40m</u>																				

PRINT

Please all information:

CLIENT SAMPLE IDENTIFICATION

DATE SAMPLED

TIME

Instructions:

Received by: (Signature) [Signature] Date/Time 3/20/95 Date 3/20/95
Relinquished by: (Signature) [Signature] Date/Time 3/20/95 Date 3/20/95
Received by: (Signature) [Signature] Date/Time 3/20/95 Date 3/20/95

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 1700 Broadway
CITY Denver STATE CO ZIP 80202
PHONE # 831-8100 FAX # _____

Sampler Name: Eric A. Lane
(signature)
(print) Eric A. Lane
Evergreen Analytical Cooler No. 412
Cooler Received

Please **PRINT**

all information:

CLIENT
SAMPLE
IDENTIFICAT

SAMPLE IDENTIFICATION	DATE SAMPLE
-----------------------	-------------

SGMP-5 (4-6)	3-20-95	1130
SGMP-5 (4-11)	3-20-95	1200
SGMP-6 (4-6)	3-20-95	1230
SGMP-6 (10-1)	3-20-95	1400
^{SS} SGMP-2 (4-6)	3-20-95	1500
Madroo Spike	3-20-95	
SGMP-10 (4-6)	3-20-95	1820
Trap Blawie		
SGMP-10 (4-6)		
SGMP-12 (4-6)	3-20-95	1900

望

55

Instructions: Sample 50ml - 5 (9-11) and (the ~~rest~~ ^{rest} of the ~~sample~~ ^{sample}).

analyze for BTEX. Some w/ SIMP-6 (10-11), ALL TBC Samples Completed.

Relinquished by: (Signature)

Date/Time	Received by: (Signature)
13/24/95	[Signature]

Date/Time 3/22/15

Date/Time	Received by: (Signature)
-----------	--------------------------

Date/Time	Received by: (Signature)
-----------	--------------------------

Date/Time

Instructions: Sample Smp-5 (9-11) had ^{recent} low ~~water~~. If the container for OBOX is not sufficient use the TWT into ¹⁰⁰ tubed

analyze for BTEX. Some w/ SEMP-6 (10-11), ALL TOC Samples Completed.

[illegible]

Signature	Date/time received by (Signature)	Date/time relinquished by (Signature)	Date/time received by (Signature)	Date/time
	3/24/95	3/22/95		
	3/24/95	3/22/95		

$\frac{1}{\sqrt{2}}$

1

Evergreen Analytical Sample Receipt/Check-in Record

Date & Time Rec'd: 3/22/95 10.15 Shipped via: Fed Ex

Client : Parsons Engineering (Airbill # if applicable)

Client Project ID(s): 722450.21020

EAL Project #(s): 95-0915 EAL Cooler(s): (Y) N

Cooler# 422

Ice packs (Y) N Y N Y N Y N Y N

Temperature °C Cold

Y N N/A

1. Custody seal(s) present:
 Seals on cooler intact ✓
 Seals on bottle intact ✓

2. Chain of Custody present: ✓

3. Containers broken or leaking:
 (Comment on COC if Y) ✓

4. Containers labeled: ✓

5. COC agrees w/ bottles received:
 (Comment on COC if N) ✓

6. COC agrees w/ labels:
 (Comment on COC if N) ✓

7. Headspace in VOA vials-waters only
 (comment on COC if Y) ✓

8. VOA samples preserved: ✓

9. pH measured on metals, cyanide or phenolics*: ✓
 List discrepancies _____
 *Non-EAL provided containers only, water samples only.

10. Metal samples present: ✓
 Total _____, Dissolved _____
 D or PD to be filtered: _____
 T,TR,D,PD to be Preserved: _____

11. Short holding times:
 Specify parameters _____

12. Multi-phase sample(s) present: ✓

13. COC signed w/ date/time: ✓

Comments: _____

(Additional comments on back)
 Custodian Signature/Date: Lee Connor 3/22/95

Polygreen Analytical Sample Receipt/Check-in Record

Date & Time Rec'd: 3/22/95 10:15 Shipped Via: HD

Client: PARSONS ES (Airbill # if applicable)

Client Project ID(s): ~~722450~~ 722450.21020

EAL Project #(s): 95-0915 EAL Cooler(s): (Y) N

Cooler# 412

Ice packs (Y) N Y N Y N Y N Y N

Temperature °C cold

Y N N/A

1. Custody seal(s) present:
 Seals on cooler intact ✓
 Seals on bottle intact ✓
2. Chain of Custody present: ✓
3. Containers broken or leaking:
 (Comment on COC if Y) ✓
4. Containers labeled: ✓
5. COC agrees w/ bottles received:
 (Comment on COC if N) ✓
6. COC agrees w/ labels:
 (Comment on COC if N) ✓
7. Headspace in VOA vials-waters only
 (comment on COC if Y) ✓
8. VOA samples preserved: ✓
9. pH measured on metals, cyanide or phenolics*: ✓
 List discrepancies _____
 *Non-EAL provided containers only, water samples only.
10. Metal samples present: ✓
 Total _____, Dissolved _____
 D or PD to be filtered: _____
 T,TR,D,PD to be Preserved: _____
11. Short holding times: ✓
 Specify parameters _____
12. Multi-phase sample(s) present: ✓
13. COC signed w/ date/time: ✓

Comments: _____

(Additional comments on back)

Custodian Signature/Date: Lee Connor

Evergreen ● lytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

CLIENT CONTACT (print) John Hicks
PROJECT ID. Med. 11 AFB
EAL QUOTE # _____ PO# 72

PHONE # 831-8100 FAX #

FAX RESULTS Y / N

TURNAROUND REQUIRED*

Sampler Name: McAfee
signature: [Signature]

Yek L. Cairne

Evergreen Analytical Cooler No. 412

Cooler Received

Please PRINT

all information:

CLIENT
SAMPLE

[illegible]

SG MP-5 (4-6)	3-20-95	1130
SG MP-5 (9-11)	3-20-95	1200
SG MP-6 (4-6)	3-20-95	1230
SG MP-6 (10-11)	3-20-95	1400
^{SS} SG MP-7 (4-6)	3-20-95	1500
Mutney Spike	3-20-95	
SG MP-10 (4-6)	3-20-95	1830
T-2 p Blauk		
SG MP-12 (4-6)		
SG SP-12 (4-6)	3-20-95	1900

[illegible]

Instructions: Sample 56MP-5 (9-11) had ^{recently} ~~been~~ ^{been} ~~used~~. If the container for BTX is not sufficient, use the 7441 to analyze for BTX. Same as 56MP-6 (10-11), ALL 70C Samples Comp be kept.

[illegible]

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-7✓	Client Project No.	: 722450.21020
Lab Sample Number	: X04554	MacDill AFB	
Date Sampled	: 3/21/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/26/95	Method	: 602
Date Analyzed	: 3/27/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032618
% Moisture	NA	Method Blank No.	: MB032695

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	3.1 J	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	0.7 J	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	100%	70%-130% (QC limits)
---	------	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

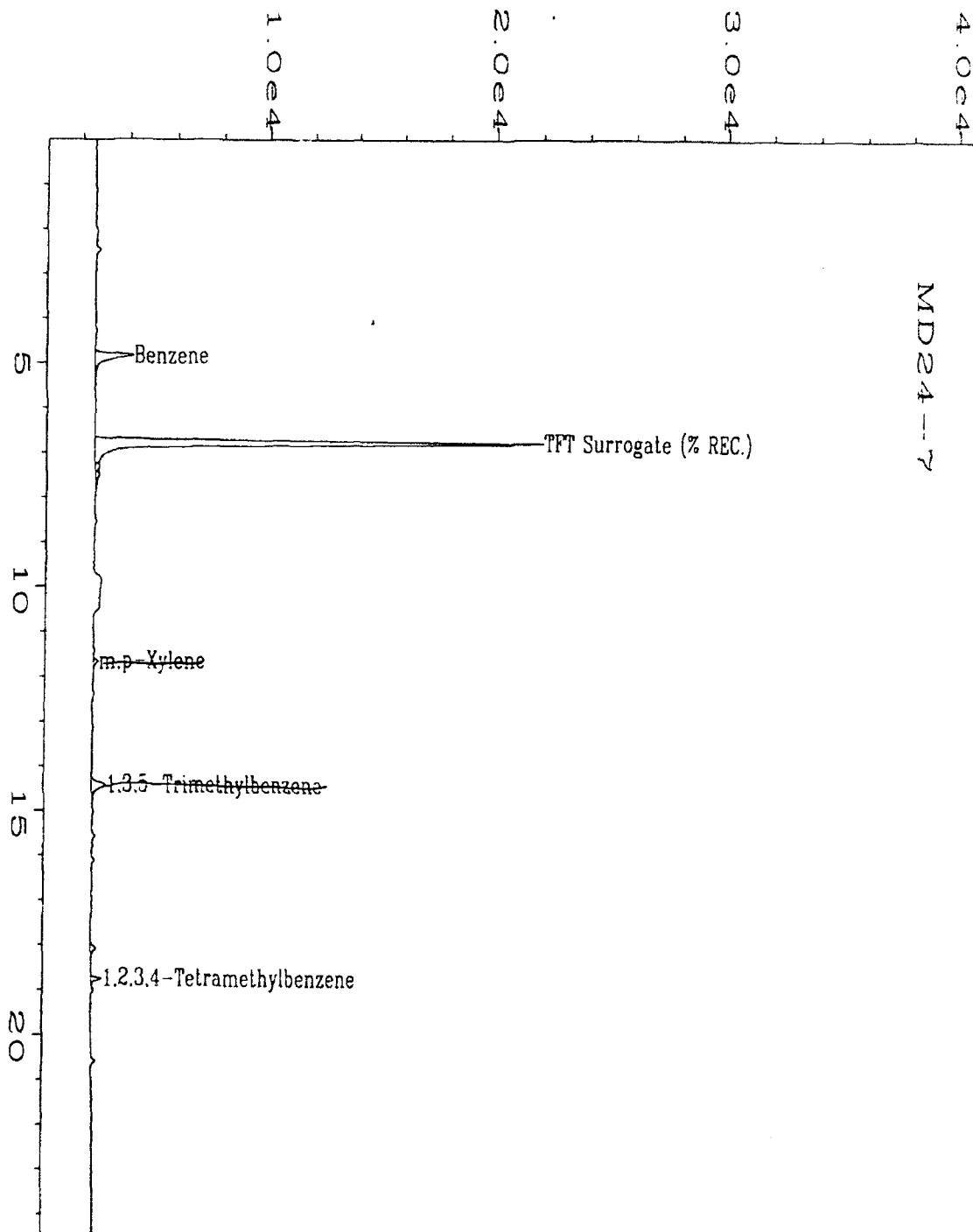
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

P. McCalla
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20326\018R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04554;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20326.MTH
quired on	: 27 Mar 95 00:41 AM	Analysis Method	: BX20326A.MTH
ort Created on	: 17 Apr 95 02:14 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

pm 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-7(DUP)✓	Client Project No.	: 722450.21020
Lab Sample Number	: X04555		MacDill AFB
Date Sampled	: 3/21/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/27/95	Method	: 602
Date Analyzed	: 3/27/95,	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032711
% Moisture	: 0.00%	Method Blank No.	: MB032795

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	3.2 J	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 100% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

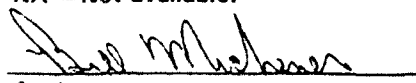
U = Compound analyzed for, but not detected.

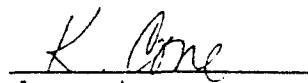
B = Compound found in blank and sample. Compare blank and sample data.

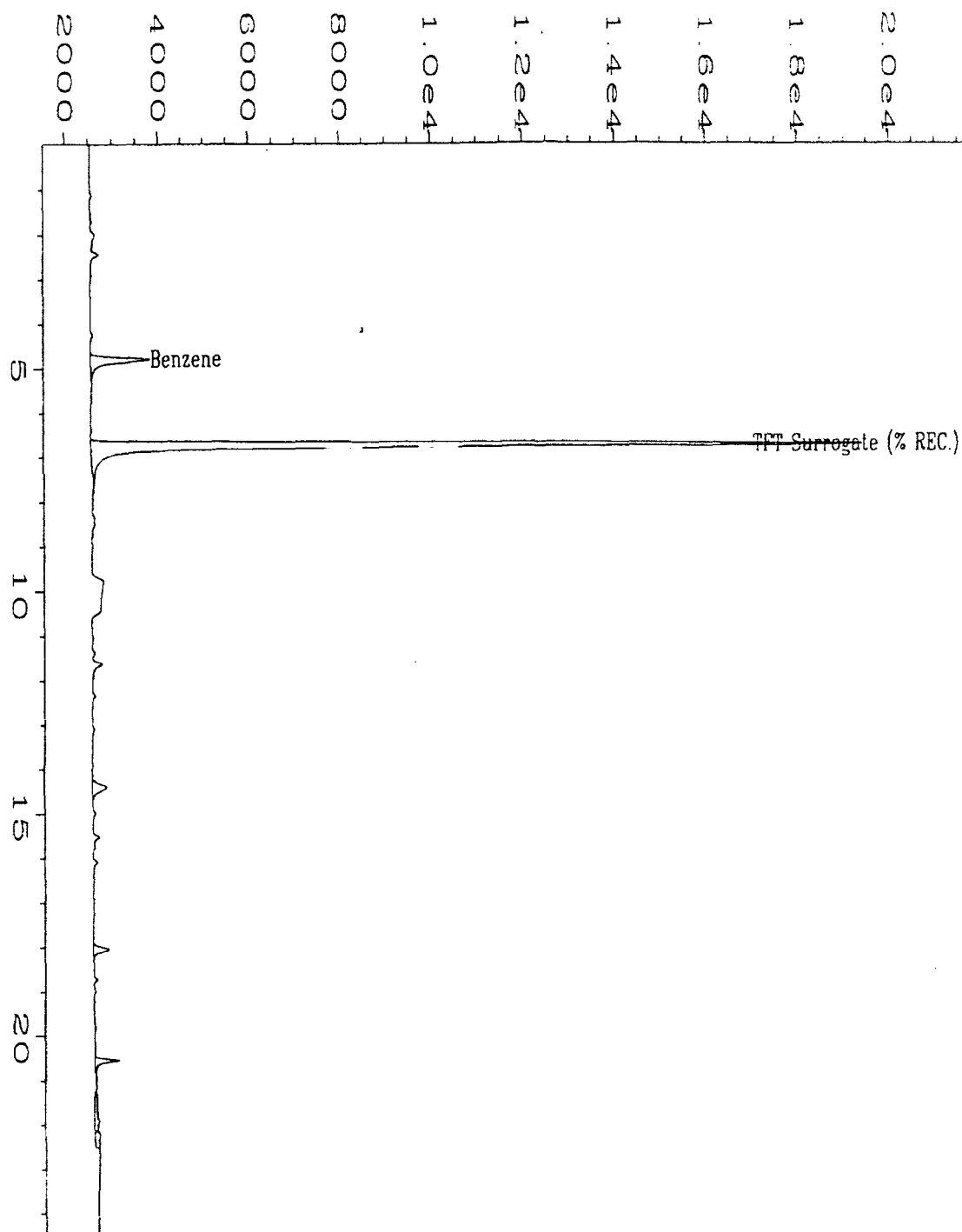
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20327\011R0601.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04555;1;5	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: BX20327.MT
Acquired on	: 27 Mar 95 06:05 PM	Analysis Method	: BX20327A.M
Report Created on:	: 17 Apr 95 12:35 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1	Sample Info	: Project#: 95-0915 Client#: MD24-7(DUP) Water

MD24-7048

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-7(DUP)	Client Project No.	: 722450.21020
Lab Sample Number	: X04555DUP		MacDill AFB
Date Sampled	: 3/21/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/27/95	Method	: 602
Date Analyzed	: 3/27/95,	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032712
% Moisture	NA	Method Blank No.	: MB032795

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	2.3 J	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	70%	70%-130% (QC limits)
---	-----	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

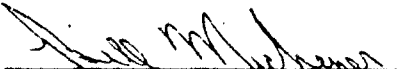
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

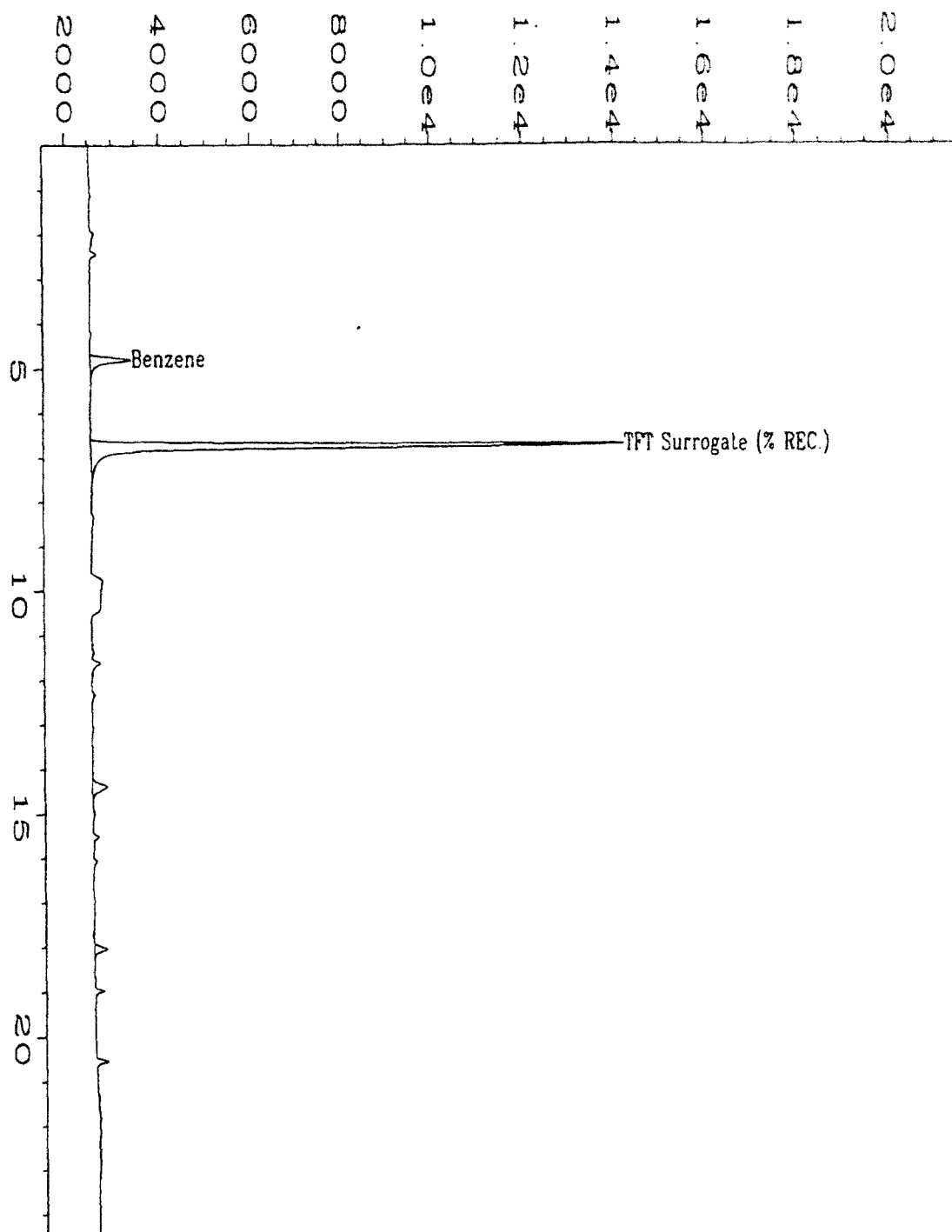
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20327\012R0601.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04555DUP;1;5	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: BX20327.MTH
quired on	: 27 Mar 95 06:50 PM	Analysis Method	: BX20327A.MTH
Port Created on:	: 17 Apr 95 12:35 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915 Client#: MD24-7(DUP)	Water	

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-9	Client Project No.	: 722450.21020
Lab Sample Number	: X04551		MacDill AFB
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/26/95	Method	: 602
Date Analyzed	: 3/26/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032612
% Moisture	NA	Method Blank No.	: MB032695

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	0.5 JB	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	99%	70%-130% (QC limits)
---	-----	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

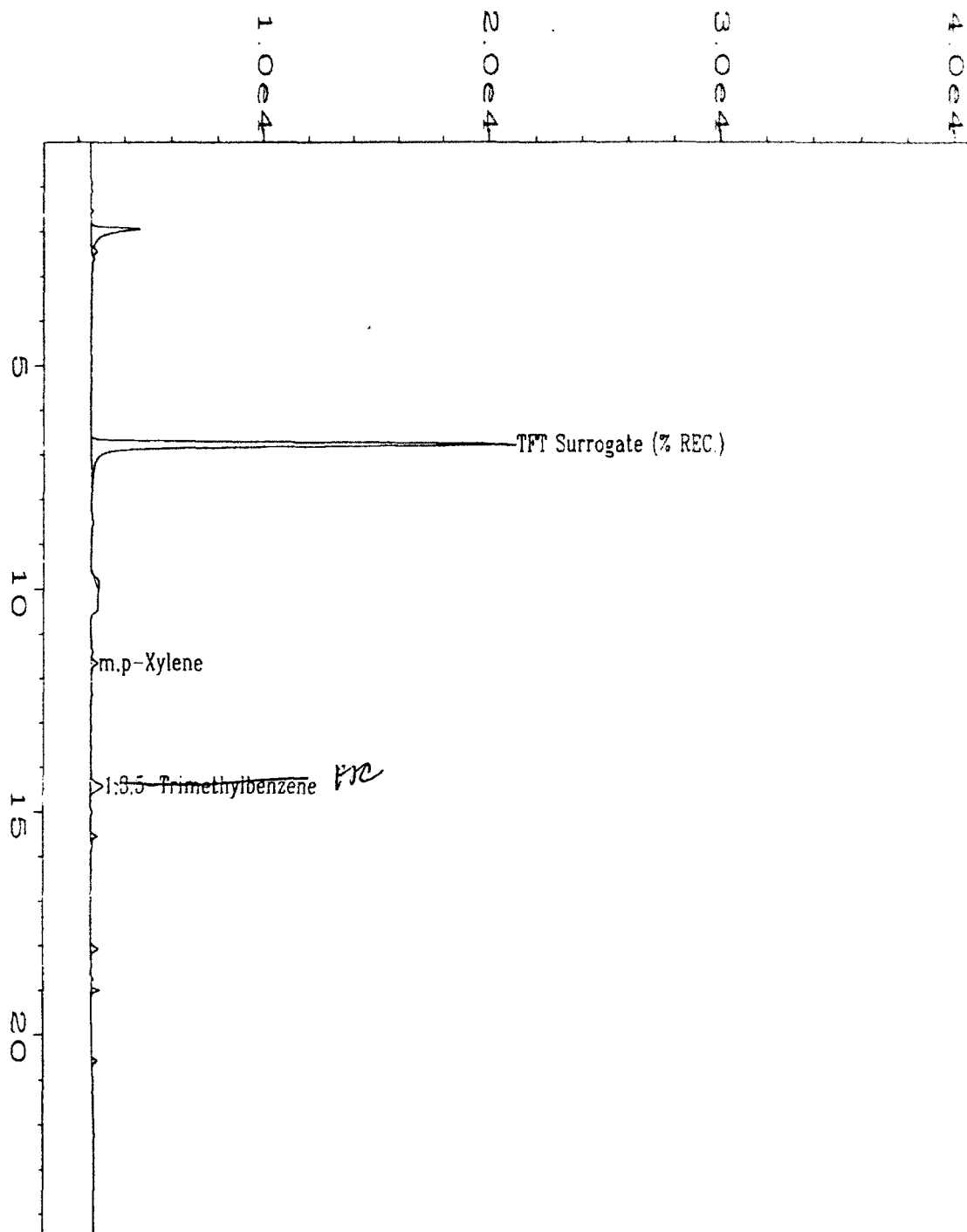
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

P. McCella
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20326\012R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04551;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20326.MTH
quired on	: 26 Mar 95 08:13 PM	Analysis Method	: BX20326A.MTH
Report Created on:	17 Apr 95 02:07 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-9	Client Project No.	: 722450.21020
Lab Sample Number	: X04551DUP		MacDill AFB
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/26/95	Method	: 602
Date Analyzed	: 3/26/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032613
% Moisture	NA	Method Blank No.	: MB032695

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	106%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value


U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

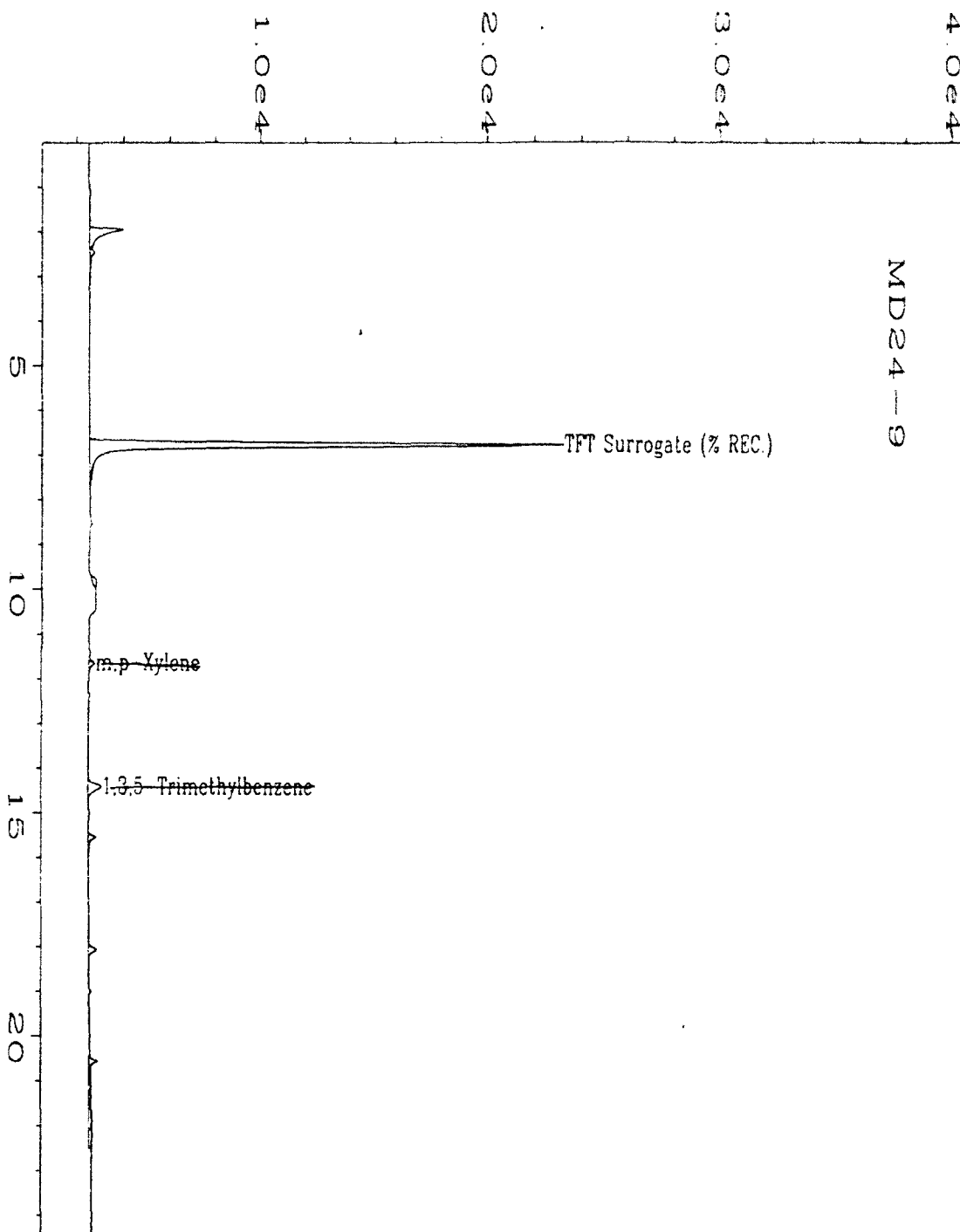
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20326\013R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04551DUP;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20326.MTH
quired on	: 26 Mar 95 08:59 PM	Analysis Method	: BX20326A.MTH
ort Created on:	: 17 Apr 95 02:09 PM	Sample Amount	: 0
st Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

prn 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-10✓	Client Project No.	: 722450.21020
Lab Sample Number	: X04553		MacDill AFB
Date Sampled	: 3/21/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/26/95	Method	: 602
Date Analyzed	: 3/26/95,	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032617
% Moisture	NA	Method Blank No.	: MB032595

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	100%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

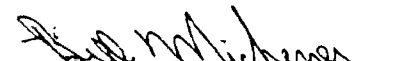
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

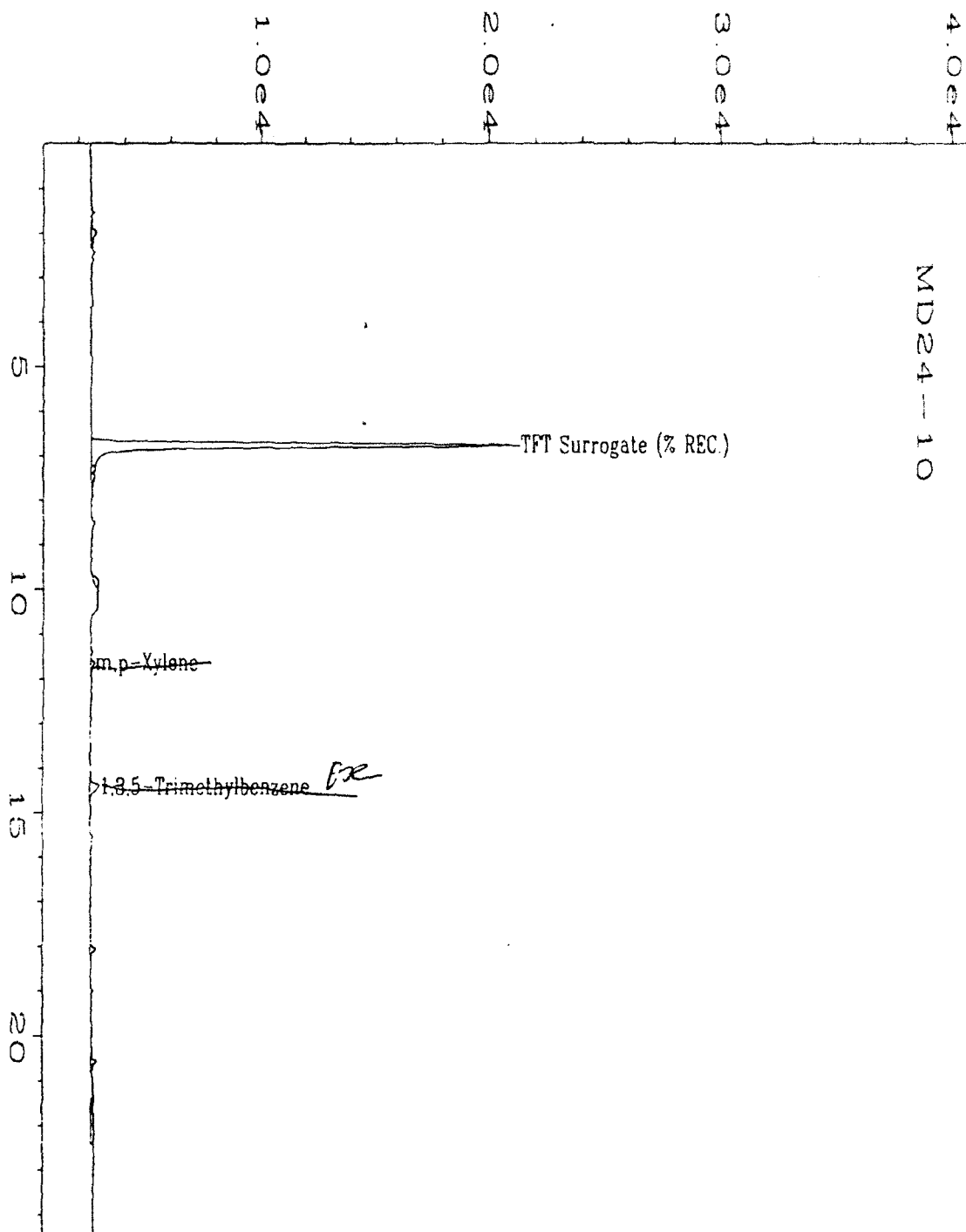
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20326\017R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04553;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20326.MTH
Acquired on	: 26 Mar 95 11:57 PM	Analysis Method	: BX20326A.MTH
Report Created on	: 17 Apr 95 02:13 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

Don 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: MD24-10A	Client Project No.	: 722450.21020
Lab Sample Number	: X04552		MacDill AFB
Date Sampled	: 3/21/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/26/95	Method	: 602
Date Analyzed	: 3/26/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032616
% Moisture	NA	Method Blank No.	: MB032695

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	0.5 JB	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	100%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

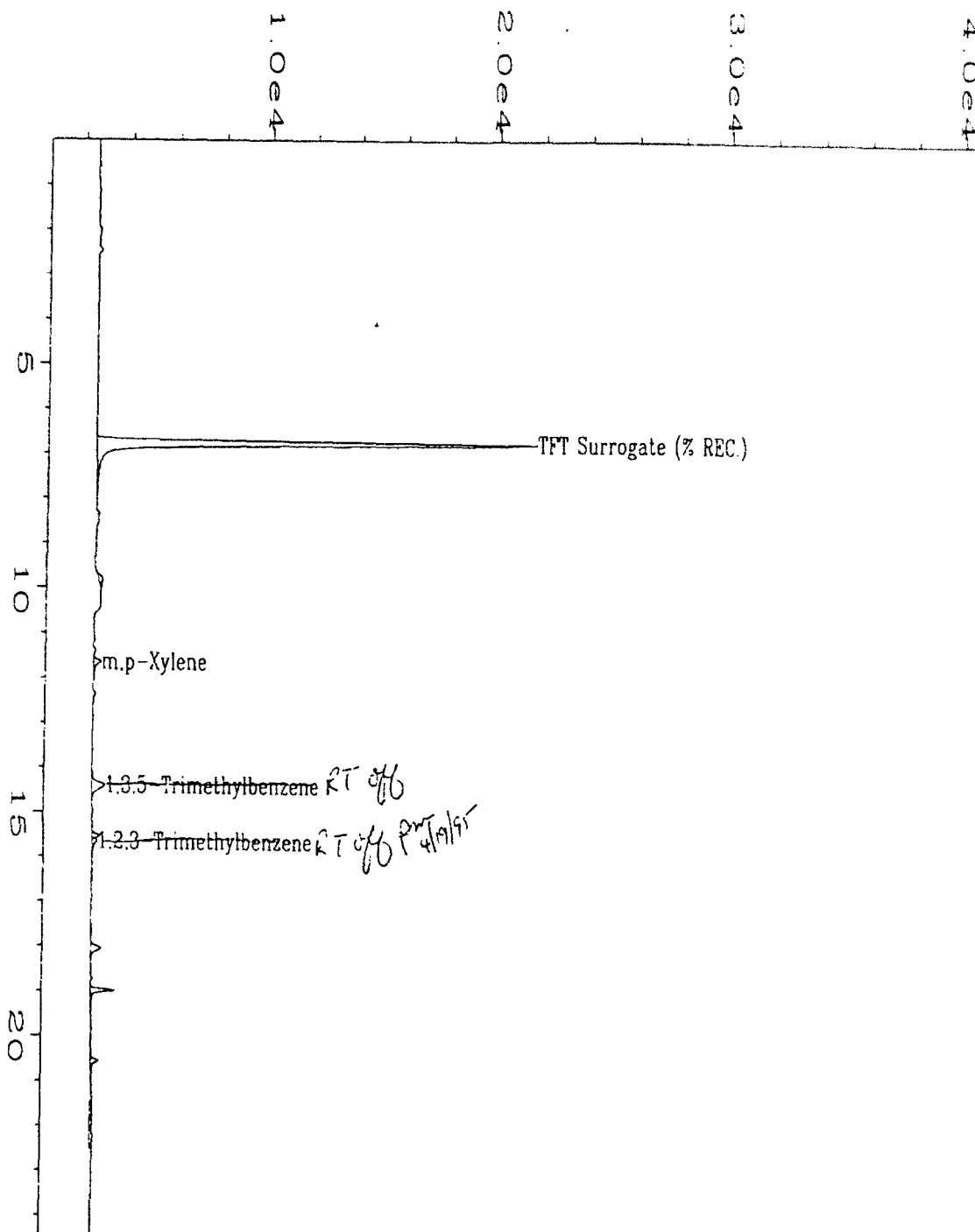
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

P. McCall
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20326\016R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04552;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20326.MTH
quired on	: 26 Mar 95 11:12 PM	Analysis Method	: BX20326A.MTH
ort Created on:	: 17 Apr 95 02:12 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-3S ✓	Client Project No.	: 722450.21020
Lab Sample Number	: X04547	MacDill AFB	
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/25/95	Method	: 602
Date Analyzed	: 3/26/95.	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032517
% Moisture	NA	Method Blank No.	: MB032595

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	3.6	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	0.7 J	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 83% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value


U = Compound analyzed for, but not detected.

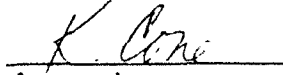
B = Compound found in blank and sample. Compare blank and sample data.

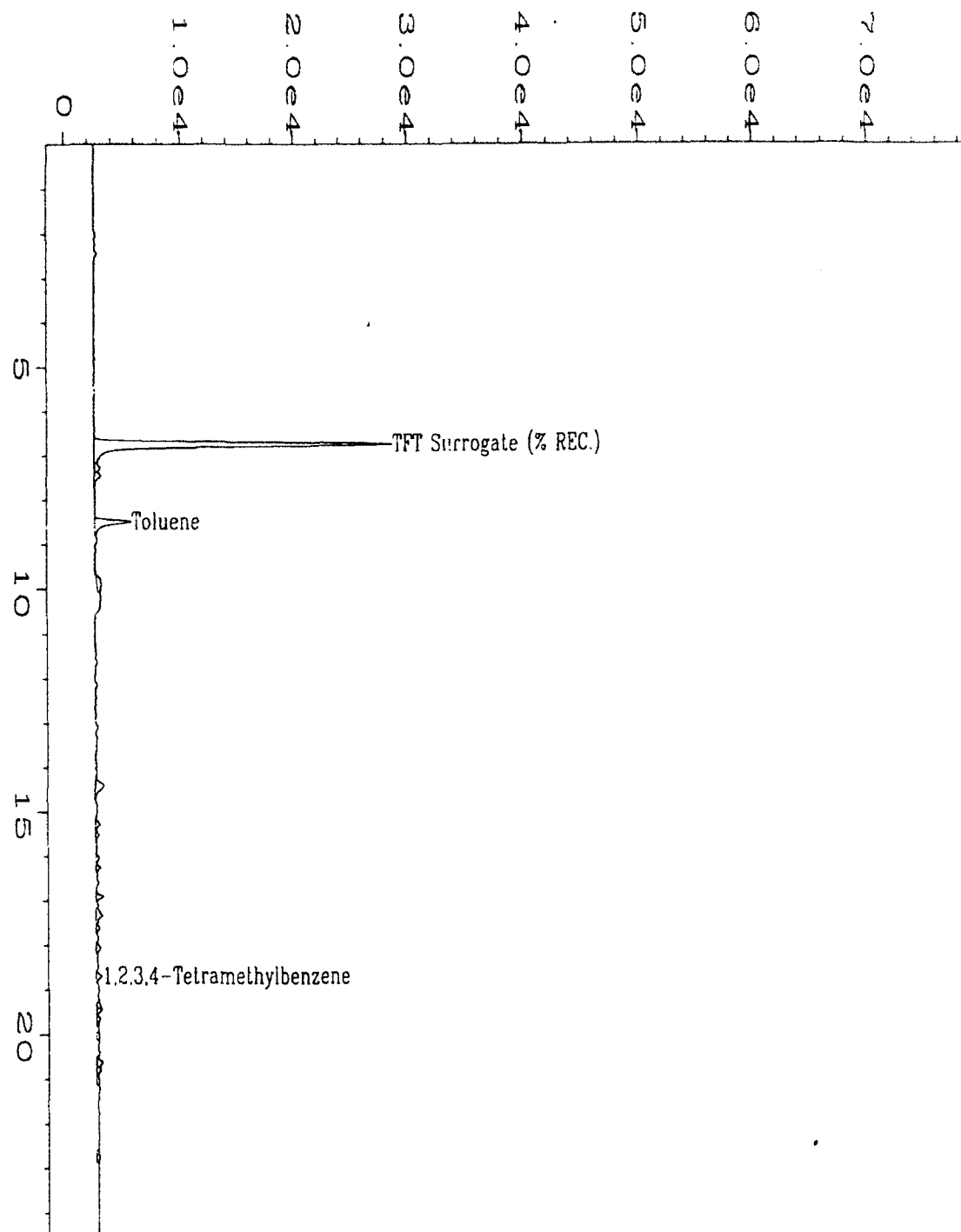
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\017R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04547;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20325.MTH
quired on	: 26 Mar 95 01:20 AM	Analysis Method	: BX20325A.MTH
port Created on:	: 17 Apr 95 01:06 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#:	24MP-3S Water

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-3D✓	Client Project No.	: 722450.21020
Lab Sample Number	: X04548		MacDill AFB
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/25/95	Method	: 602
Date Analyzed	: 3/26/95,	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032518
% Moisture	NA	Method Blank No.	: MB032595

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	0.8 J	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	83%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value


U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

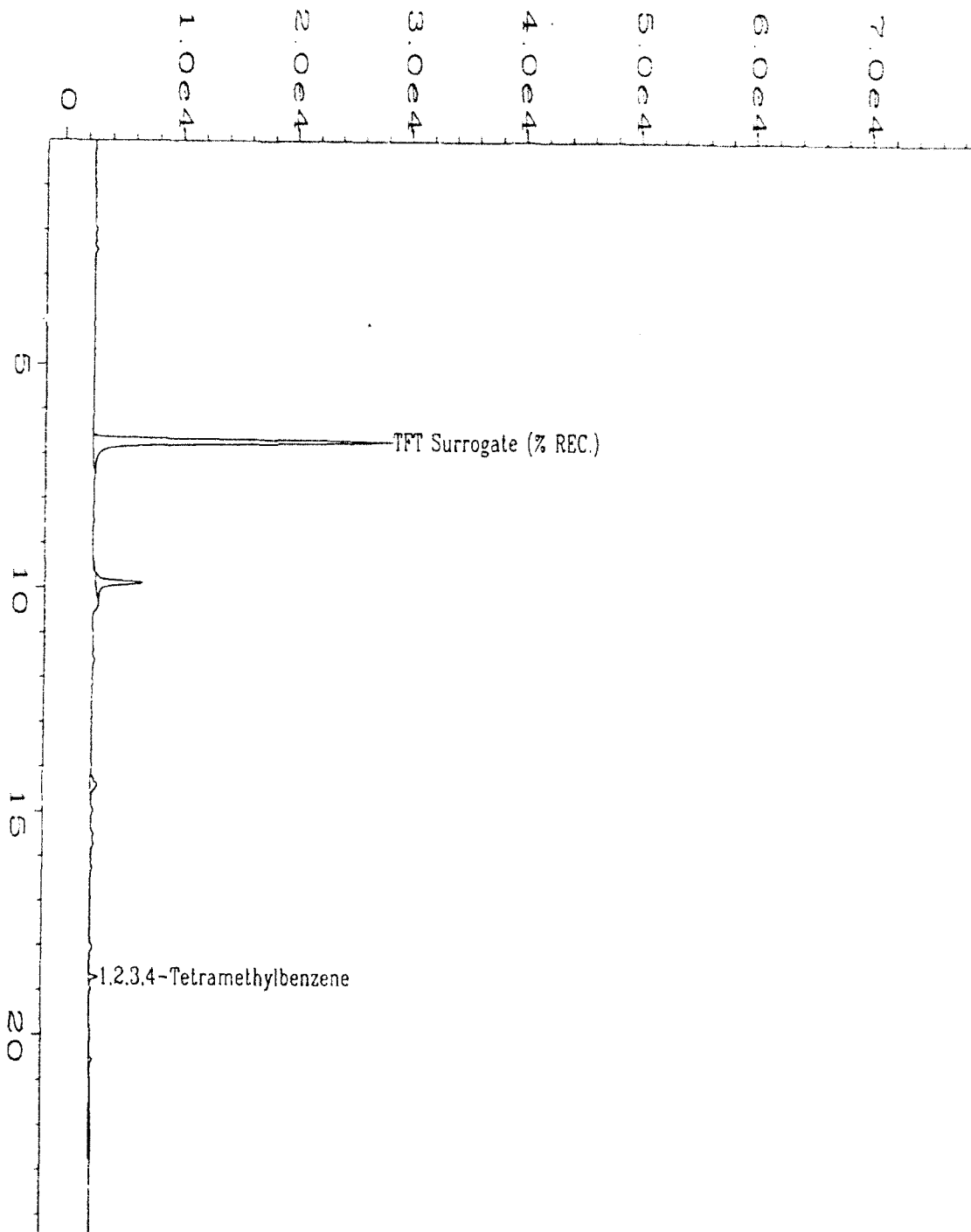
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\018R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04548;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20325.MTH
Acquired on	: 26 Mar 95 02:04 AM	Analysis Method	: BX20325A.MTH
Report Created on	: 17 Apr 95 01:07 PM	Sample Amount	: 0
Last Recalib on	: 1. APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#:	24MP-3D
			Water

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-5S	Client Project No.	: 722450.21020
Lab Sample Number	: X04546		MacDill AFB
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/25/95	Method	: 602
Date Analyzed	: 3/25/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032513
% Moisture	NA	Method Blank No.	: MB032595

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	9.3	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 89% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

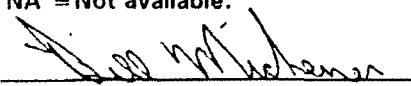
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

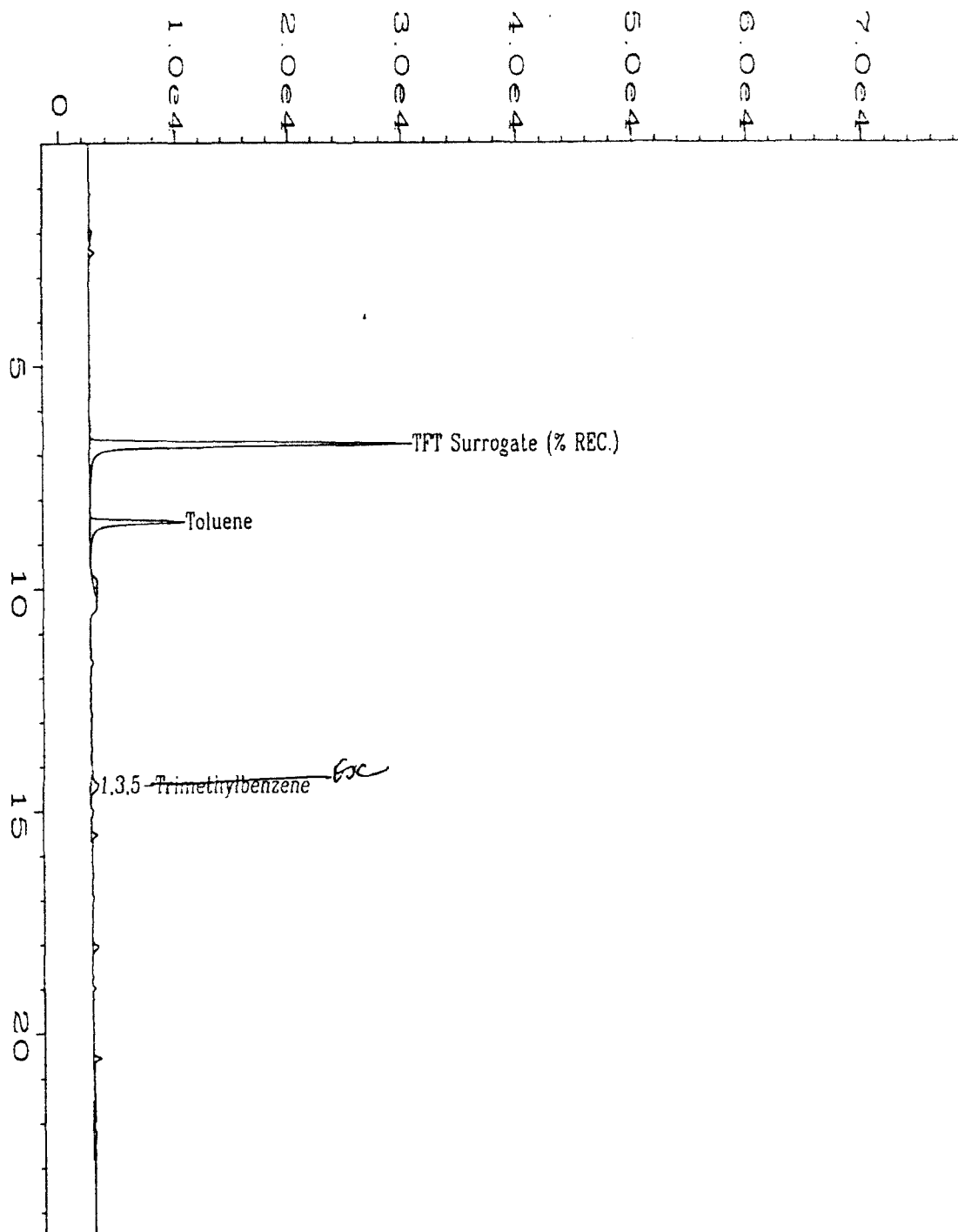
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\013R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04546;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20325.MTH
quired on	: 25 Mar 95 10:23 PM	Analysis Method	: BX20325A.MTH
Report Created on:	: 17 Apr 95 01:03 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#:	24MP-5S Water

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-5S	Client Project No.	: 722450.21020
Lab Sample Number	: X04546DUP		MacDill AFB
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/25/95	Method	: 602
Date Analyzed	: 3/25/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032514
% Moisture	NA	Method Blank No.	: MB032595

Compound Name	Gas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	9.0	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 90% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

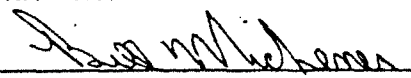
U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

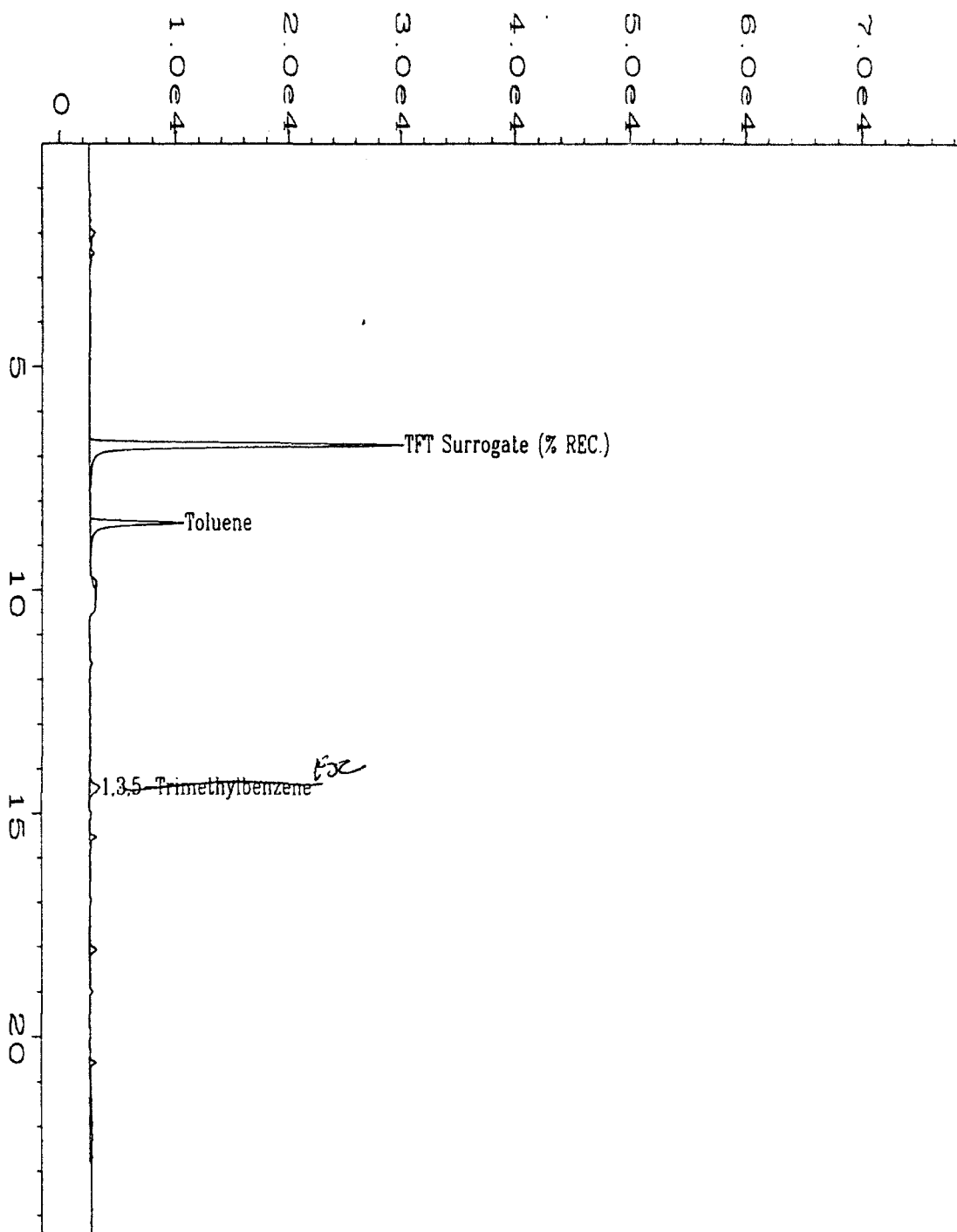
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\014R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04546DUP;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20325.MTH
Acquired on	: 25 Mar 95 11:08 PM	Analysis Method	: BX20325A.MTH
Report Created on:	: 17 Apr 95 01:03 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#:	24MP-5S Water

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-8S4	Client Project No.	: 722450.21020
Lab Sample Number	: X04550		MacDill AFB
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/25/95	Method	: 602
Date Analyzed	: 3/26/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032521
% Moisture	NA	Method Blank No.	: MB032595

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	5.4	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 76% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

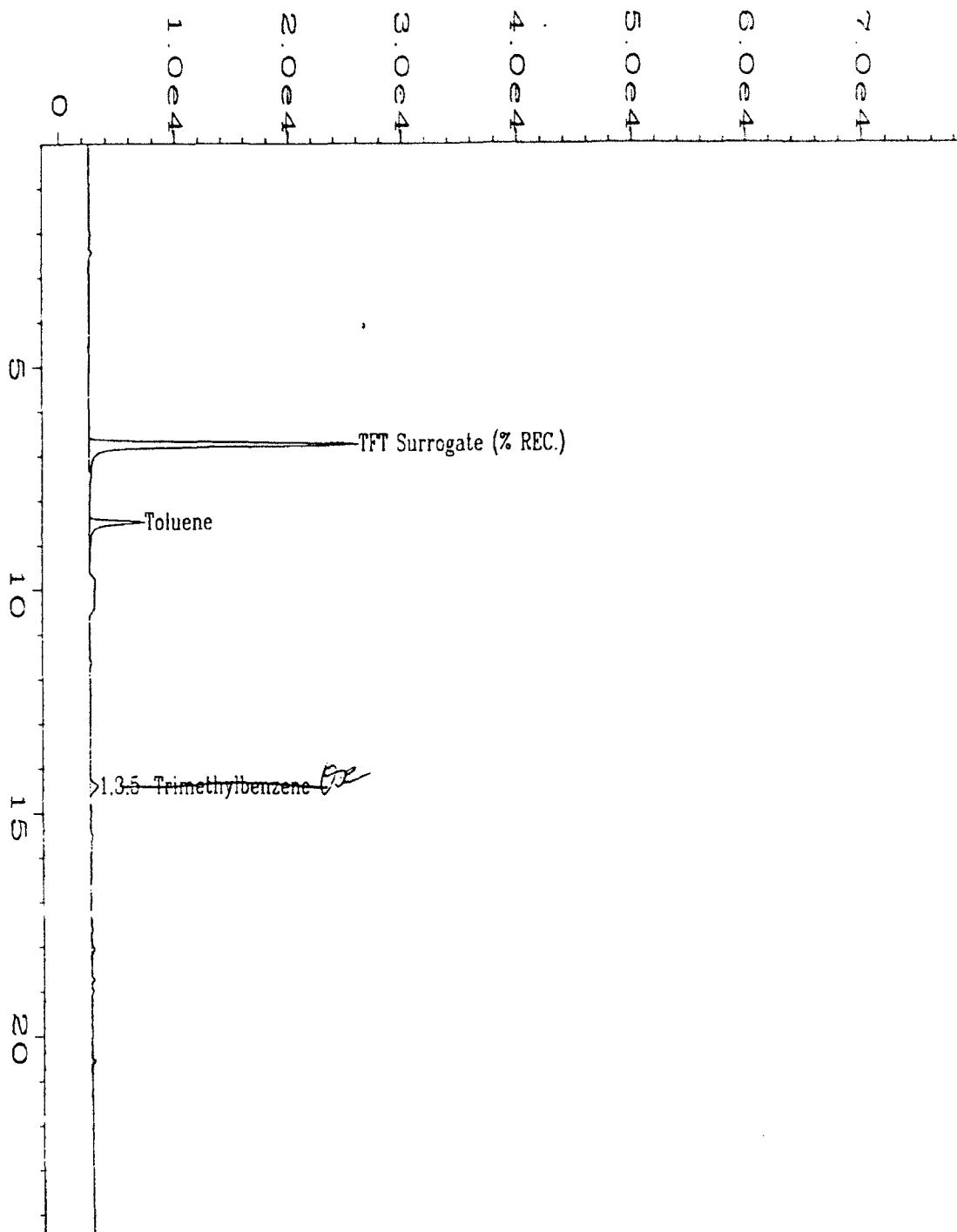
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\021R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 21
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04550;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20325.MTH
quired on	: 26 Mar 95 04:16 AM	Analysis Method	: BX20325A.MTH
Report Created on:	: 17 Apr 95 01:11 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#: 24MP-8S	Water

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-8S/	Client Project No.	: 722450.21020
Lab Sample Number	: X04550DUP	MacDill AFB	
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/25/95	Method	: 602
Date Analyzed	: 3/26/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032522
% Moisture	NA	Method Blank No.	: MB032595

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	5.6	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 83% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

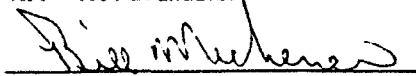
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

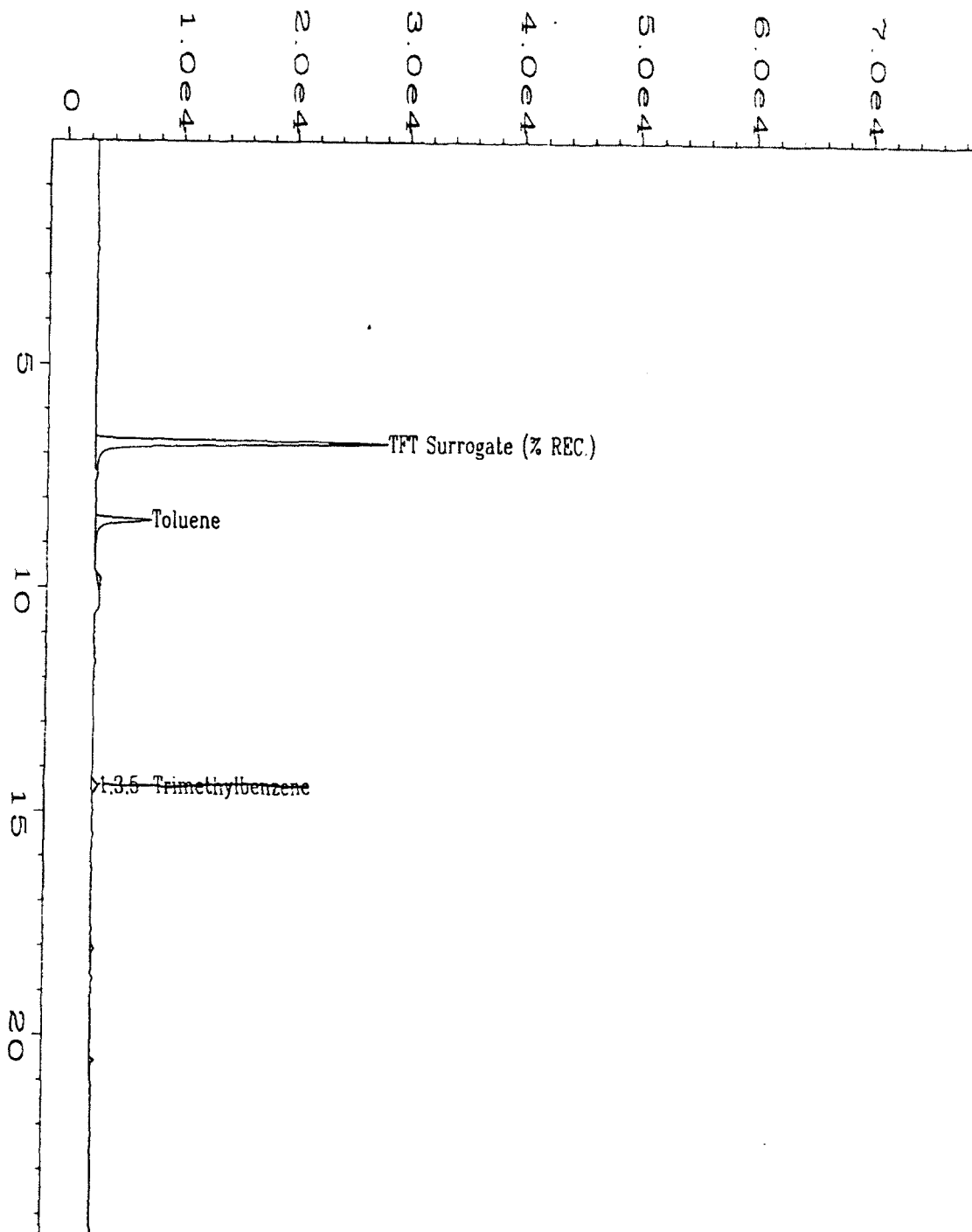
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\022R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 22
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04550DUP;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20325.MTH
Acquired on	: 26 Mar 95 05:01 AM	Analysis Method	: BX20325A.MTH
Report Created on	: 17 Apr 95 01:12 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#:	24MP-8S
			Water

pm 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: 24MP-8D/	Client Project No.	: 722450.21020
Lab Sample Number	: X04549		MacDill AFB
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/25/95	Method	: 602
Date Analyzed	: 3/26/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032520
% Moisture	NA	Method Blank No.	: MB032595

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 84% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

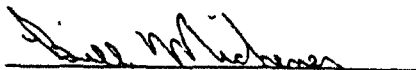
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

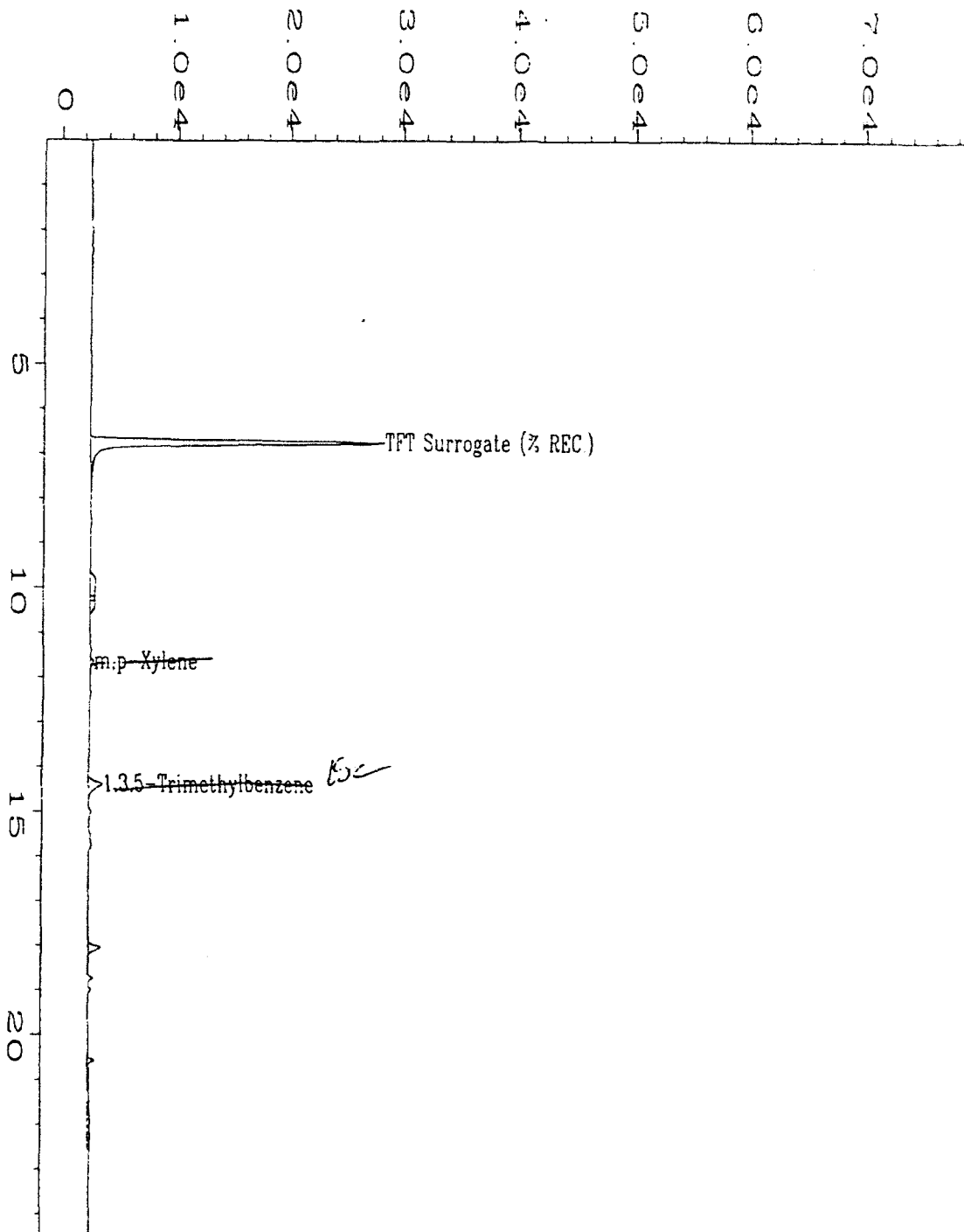
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\020R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04549;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20325.MTH
quired on	: 26 Mar 95 03:32 AM	Analysis Method	: BX20325A.MTH
port Created on:	17 Apr 95 01:10 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#:	24MP-8D
			Water

Don 4/19/95

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 56MP-1(4-6)	Client Project No.	: 722450.21020/MAC
Lab Sample No.	: X04557	Lab Project No.	: 95-0915
Date Sampled	: 3/17/95	EPA Method No.	: 5030/8015 Mod.
Date Received	: 3/22/95	Matrix	: SOIL
Date Prepared	: 3/30/95	Method Blank	: MB033095
Date Analyzed	: 3/30/95		

Compound	Spike Added (mg/kg)	Sample Concentration (mg/kg)	MS Concentration (mg/kg)	MS %REC	QC Limits %REC
Gasoline	1.00	0.00	0.93	93%	60-140

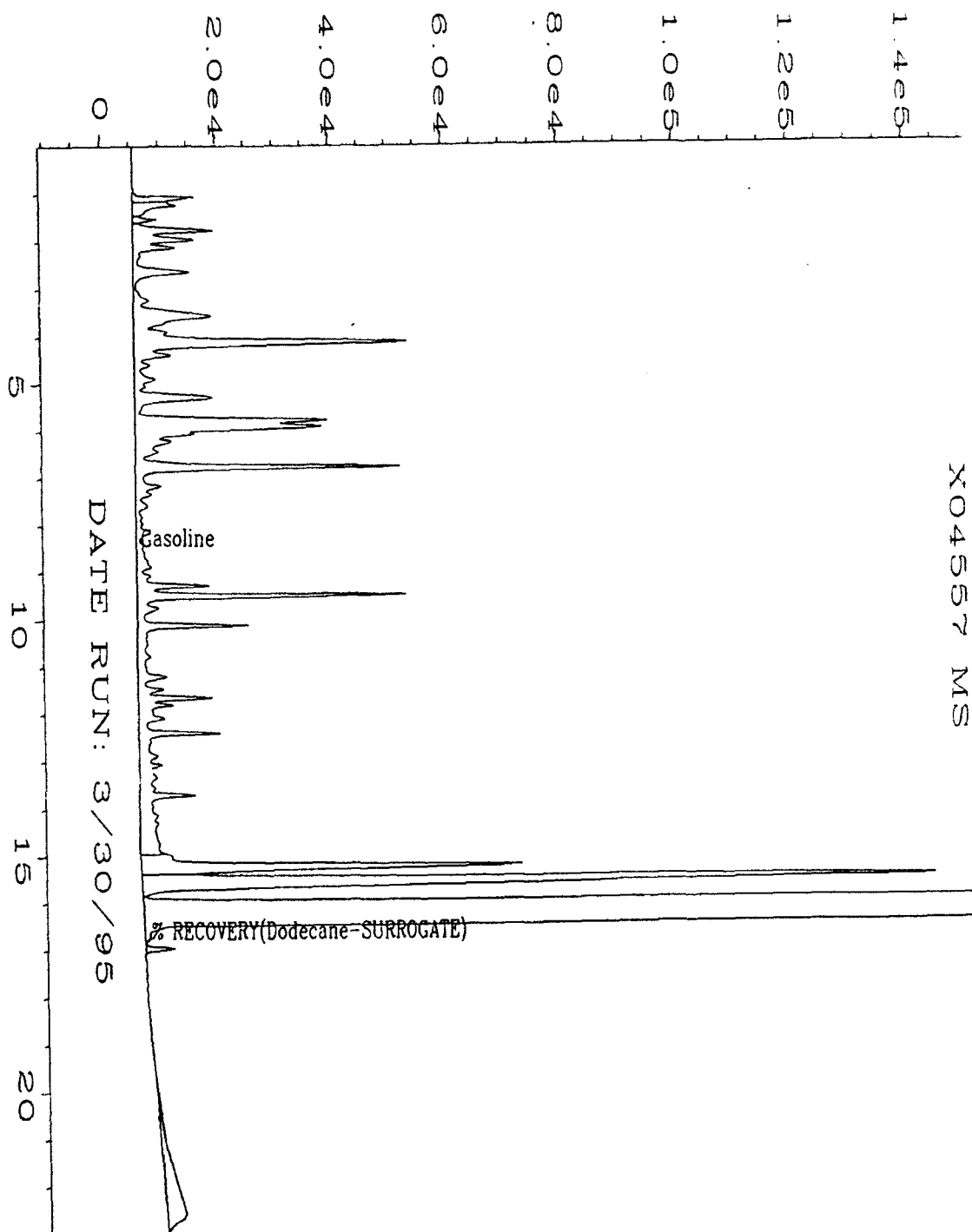
Compound	Spike Added (mg/kg)	MSD Concentration (mg/kg)	MS %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	1.00	0.91	91%	2	50	60-140

* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.

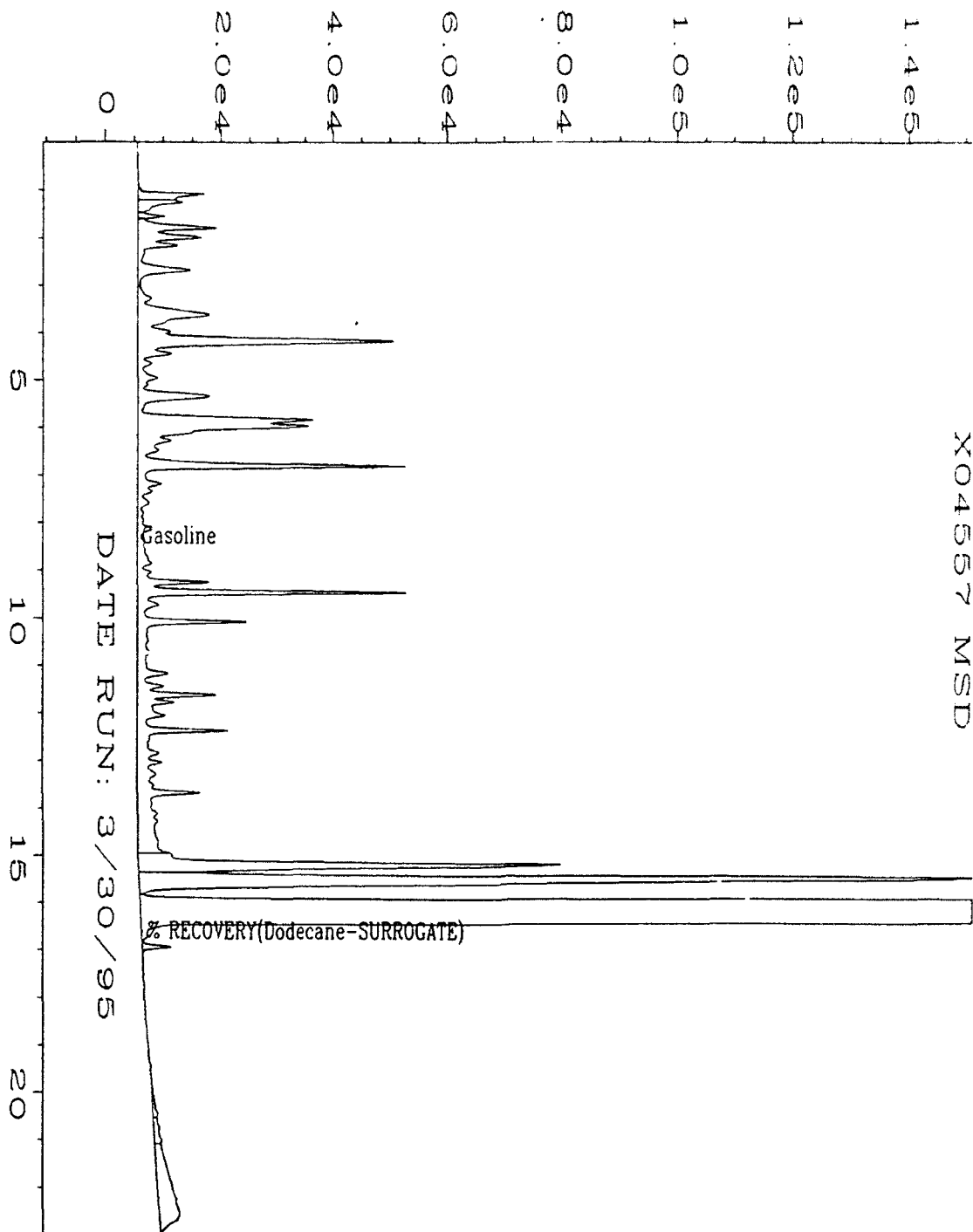
Spike Recovery: 0 out of (2) outside limits.

Comments: NA = Not analyzed/not applicable.



Data File Name	: C:\HPCHEM\1\DATA\TVH0330\004F0201.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 4
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04557 MS	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: TVH0323.MTH
Acquired on	: 30 Mar 95 07:36 PM	Analysis Method	: TVH0330.MTH
Report Created on	: 31 Mar 95 09:45 AM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		

Client # 56MP-1(4-b)



Data File Name	: C:\HPCHEM\1\DATA\TVH0330\005F0201.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 5
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04557 MSD	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: TVH0323 H
Acquired on	: 30 Mar 95 08:10 PM	Analysis Method	: TVH0330.MPF
Report Created on:	: 31 Mar 95 09:46 AM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		

Client # 56MP-1(4-6)

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24MP-5S	Client Project No.	: 722450.21020
Lab Sample No.	: X04546	MacDill AFB	
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	EPA Method No.	: 602
Date Prepared	: 3/25/95	Matrix	: Water
Date Analyzed	: 3/25,26/1995	Lab File Number(s)	: BX2032515,16
		Method Blank	: MB032595

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	0.0	16.7	84	50-150
Toluene	20.0	9.3	26.1	84	50-148
Ethyl Benzene	20.0	0.0	16.5	83	50-150
m,p-Xylene	40.0	0.0	32.2	81	50-150
o-Xylene	20.0	0.0	15.9	80	50-150
Chlorobenzene	20.0	0.0	16.9	85	55-135
1,3,5-TMB	20.0	0.0	16.4	82	50-150
1,2,4-TMB	20.0	0.0	16.4	82	50-150
1,2,3-TMB	20.0	0.0	16.3	82	50-150
1,2,3,4-TeMB	20.0	0.0	15.9	80	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20.0	15.9	80	4.9	25	50-150
Toluene	20.0	24.9	78	7.4	25	50-148
Ethyl Benzene	20.0	15.5	78	6.3	25	50-150
m,p-Xylene	40.0	29.7	74	8.1	25	50-150
o-Xylene	20.0	14.8	74	7.2	25	50-150
Chlorobenzene	20.0	16.2	81	4.2	25	55-135
1,3,5-TMB	20.0	14.3	72	13.7	25	50-150
1,2,4-TMB	20.0	14.3	72	13.7	25	50-150
1,2,3-TMB	20.0	14.7	74	10.3	25	50-150
1,2,3,4-TeMB	20.0	13.6	68	15.6	25	50-150

* = Values outside of QC limits.

RPD: 0 out of (10) outside limits.

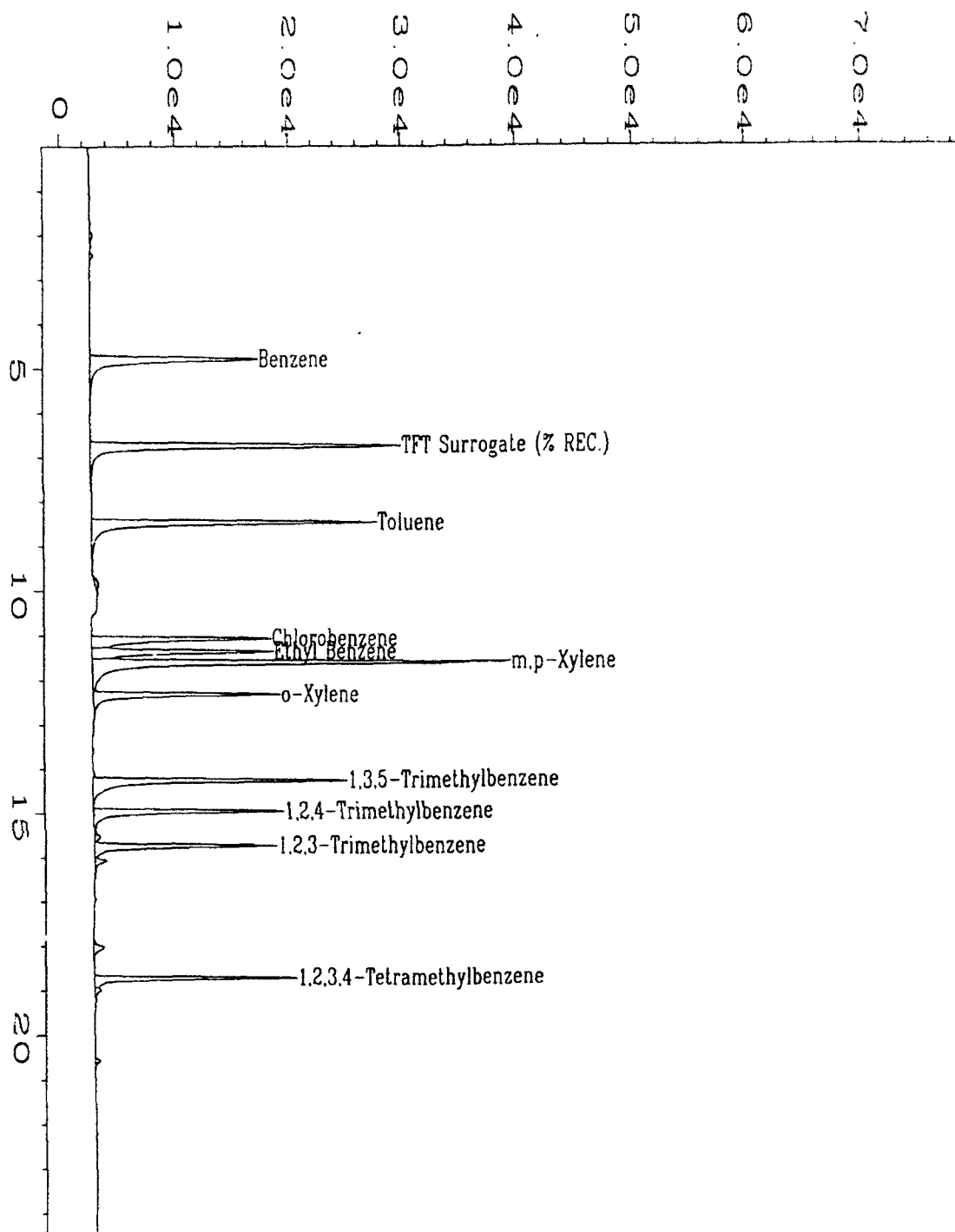
Spike Recovery: 0 out of (20) outside limits.

Comments:

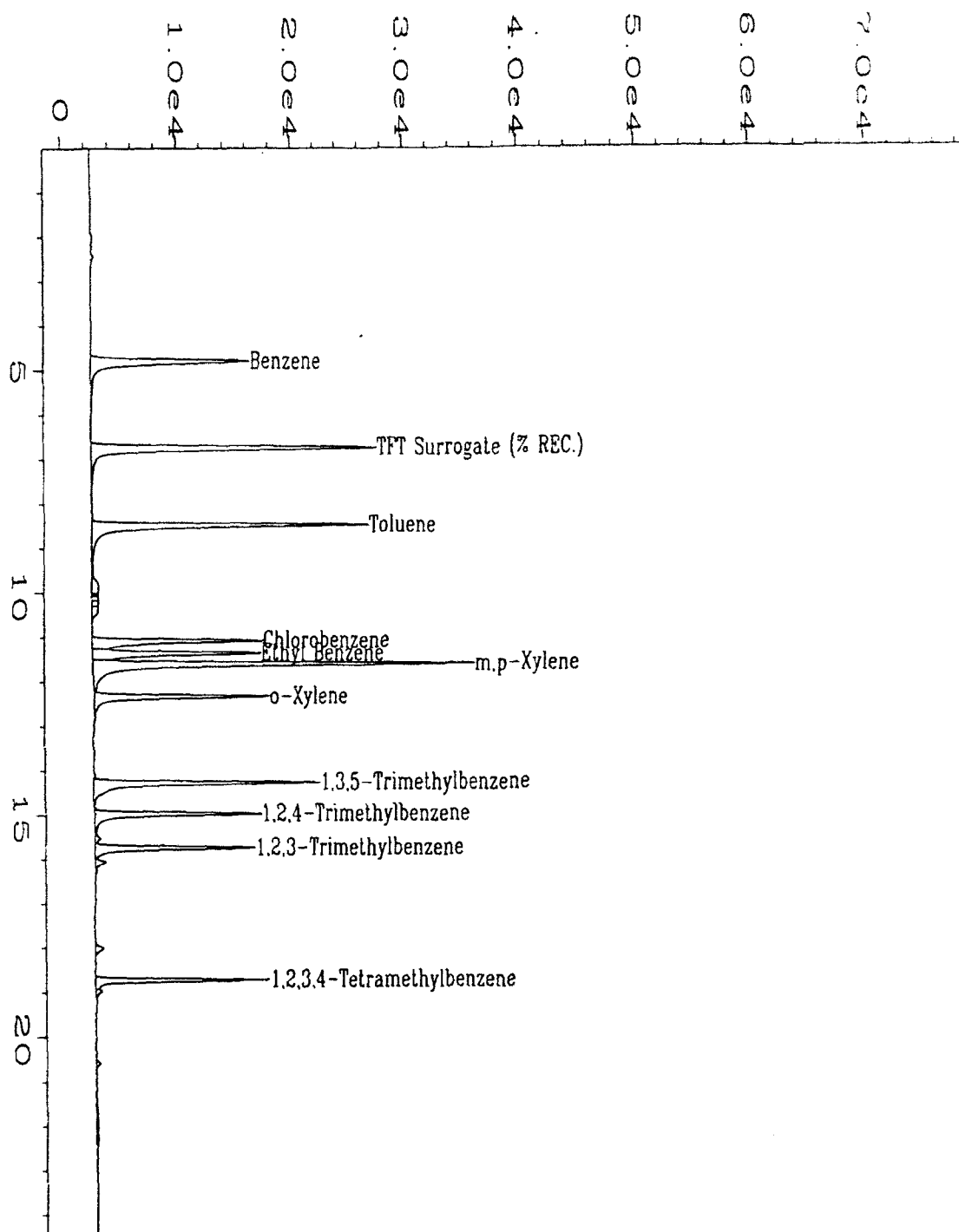
K. Cone
Analyst

Am'Ceelle
Approved

MS0915A.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20325\015R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04546MS;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX20325
Acquired on	: 25 Mar 95 11:51 PM	Analysis Method	: BX20325, 1
Report Created on:	17 Apr 95 01:04 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#:	24MP-5S
			Water



Data File Name	: C:\HPCHEM\2\DATA\BX20325\016R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04546MSD;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20325.MTH
Acquired on	: 26 Mar 95 00:36 AM	Analysis Method	: BX20325A.MTH
Port Created on	: 17 Apr 95 01:05 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915	Client#: 24MP-5S	Water

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
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BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MD24-9	Client Project No.	: 722450.21020
Lab Sample No.	: X04551		MacDill AFB
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	EPA Method No.	: 602
Date Prepared	: 3/26/95	Matrix	: Water
Date Analyzed	: 3/26/95	Lab File Number(s)	: BX2032614,15
		Method Blank	: MB032695

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	0.0	17.3	87	65-121
Toluene	20.0	0.0	17.1	86	69-117
Ethyl Benzene	20.0	0.0	17.3	87	68-118
m,p-Xylene	40.0	0.5	34.6	85	66-116
o-Xylene	20.0	0.0	17.3	87	73-117
Chlorobenzene	20.0	0.0	17.3	87	65-121
1,3,5-TMB	20.0	0.0	16.8	84	65-121
1,2,4-TMB	20.0	0.0	17.1	86	65-121
1,2,3-TMB	20.0	0.0	17.2	86	65-121
1,2,3,4-TeMB	20.0	0.0	16.7	84	65-121

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20.0	17.7	89	2.3	17.4	65-121
Toluene	20.0	17.5	88	2.3	15.8	69-117
Ethyl Benzene	20.0	17.7	89	2.3	11.9	68-118
m,p-Xylene	40.0	35.3	87	2.0	15.4	66-116
o-Xylene	20.0	17.8	89	2.8	13.2	73-117
Chlorobenzene	20.0	17.8	89	2.8	17.4	65-121
1,3,5-TMB	20.0	17.2	86	2.4	17.4	65-121
1,2,4-TMB	20.0	17.8	89	4.0	17.4	65-121
1,2,3-TMB	20.0	17.9	90	4.0	17.4	65-121
1,2,3,4-TeMB	20.0	17.8	89	6.4	17.4	65-121

* = Values outside of QC limits.

RPD: 0 out of (10) outside limits.

Spike Recovery: 0 out of (20) outside limits.

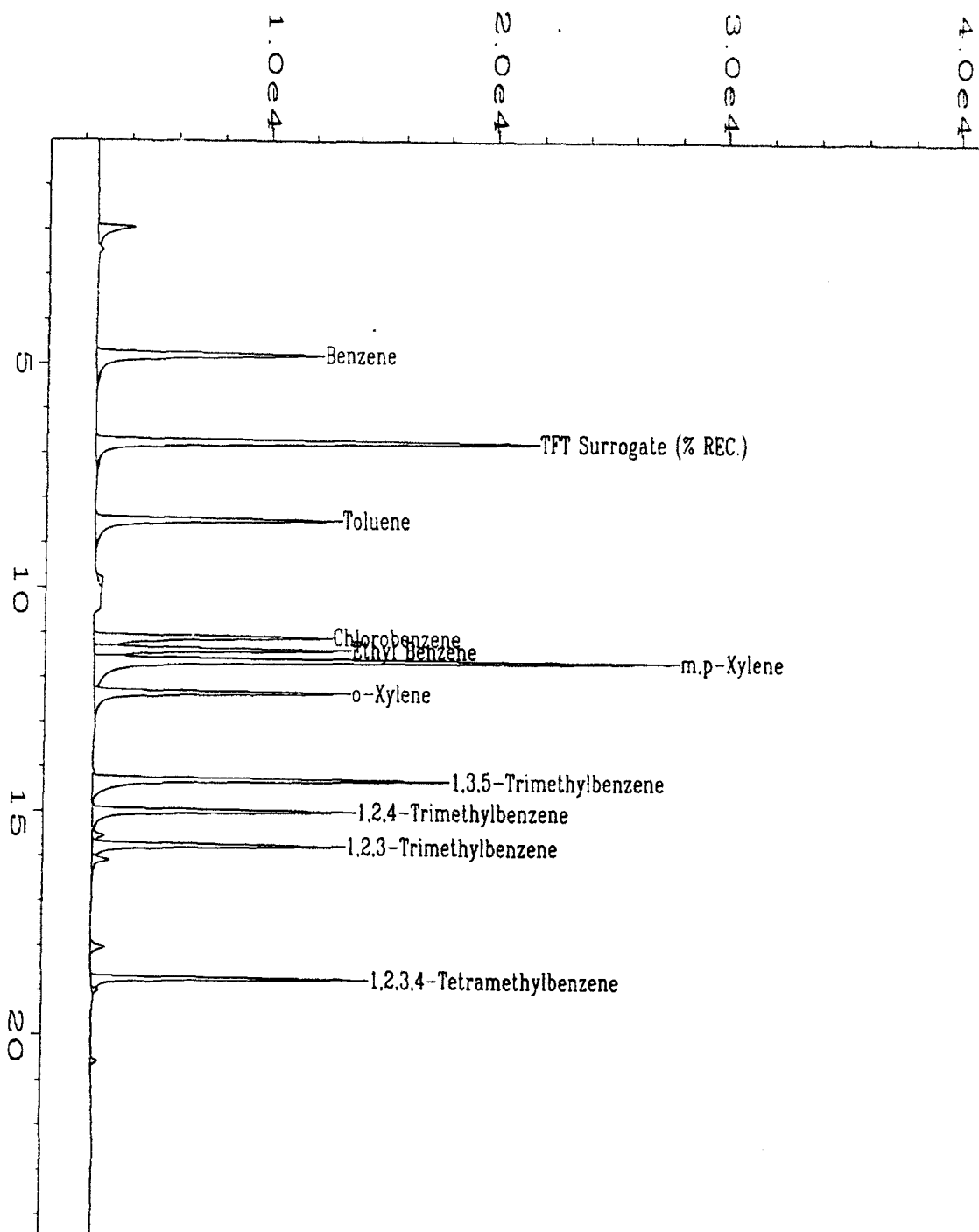
Comments:

[Signature]

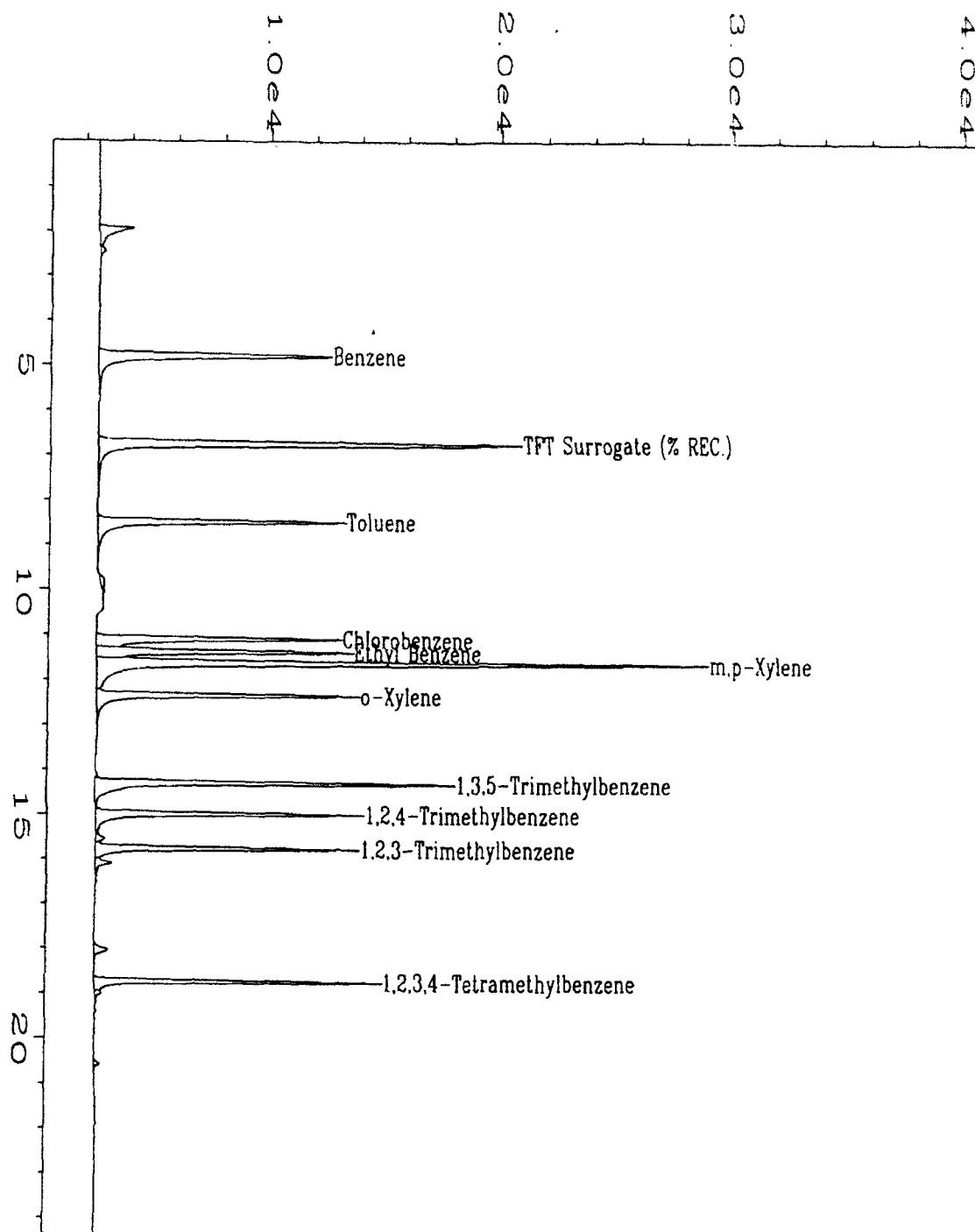
Analyst

[Signature]
Approved

MS0915B.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20326\014R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04551MS;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20326.MTH
quired on	: 26 Mar 95 09:43 PM	Analysis Method	: BX20326A.MTH
Report Created on:	: 17 Apr 95 02:10 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\2\DATA\BX20326\015R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04551MSD;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20326 4
Acquired on	: 26 Mar 95 10:27 PM	Analysis Method	: BX20326A...T
Report Created on	: 17 Apr 95 02:10 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: Matrix Spike 3/20	Client Project No.	: 722450.21020
Lab Sample No.	: X04571	MacDill AFB	
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	EPA Method No.	: 8020
Date Prepared	: 3/29/95	Matrix	: SOIL
Date Analyzed	: 3/30/95	Lab File Number(s)	: BX2032926,27
		Method Blank	: MB032995

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	40.0	0.0	35.3	88	50-150
Toluene	40.0	0.0	32.6	82	50-148
Ethyl Benzene	40.0	0.0	28.4	71	50-150
m,p-Xylene	80.0	0.0	54.3	68	50-150
o-Xylene	40.0	0.0	30.6	77	50-150
Chlorobenzene	40.0	0.0	32.8	82	55-135
1,3,5-TMB	40.0	0.0	24.4	61	50-150
1,2,4-TMB	40.0	0.0	26.9	67	50-150
1,2,3-TMB	40.0	0.0	27.1	68	50-150
1,2,3,4-TeMB	40.0	0.0	22.0	55	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	40.0	32.5	81	8.3	25	50-150
Toluene	40.0	31.7	79	2.8	25	50-148
Ethyl Benzene	40.0	28.0	70	1.4	25	50-150
m,p-Xylene	80.0	53.4	67	1.7	25	50-150
o-Xylene	40.0	30.3	76	1.0	25	50-150
Chlorobenzene	40.0	32.2	81	1.8	25	55-135
1,3,5-TMB	40.0	24.1	60	1.2	25	50-150
1,2,4-TMB	40.0	26.7	67	0.7	25	50-150
1,2,3-TMB	40.0	27.2	68	0.4	25	50-150
1,2,3,4-TeMB	40.0	21.5	54	2.3	25	50-150

* = Values outside of QC limits.

RPD: 0 out of (10) outside limits.

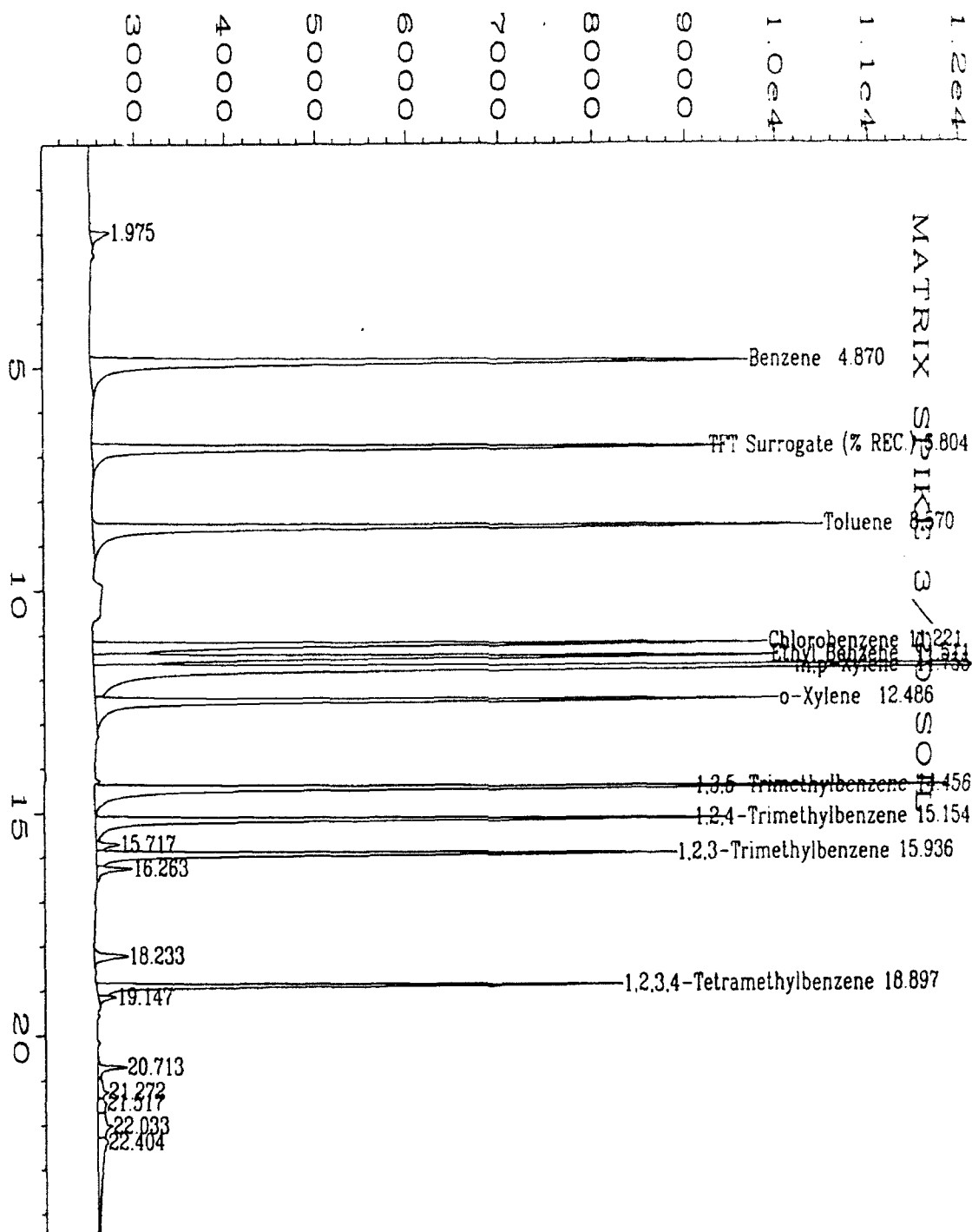
Spike Recovery: 0 out of (20) outside limits.

Comments:

K. Cone
Analyst

Amcella
Approved

MS0915E.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20329\026R0101.D

Operator : C.J. Cook

Instrument : BTEX2

Sample Name : X04571MS;5;1

Run Time Bar Code:

Acquired on : 30 Mar 95 06:53 AM

Report Created on: 18 Apr 95 00:15 AM

Last Recalib on : 14 APR 95 00:39 AM

Multiplier : 1

Page Number : 1

Vial Number : 26

Injection Number : 1

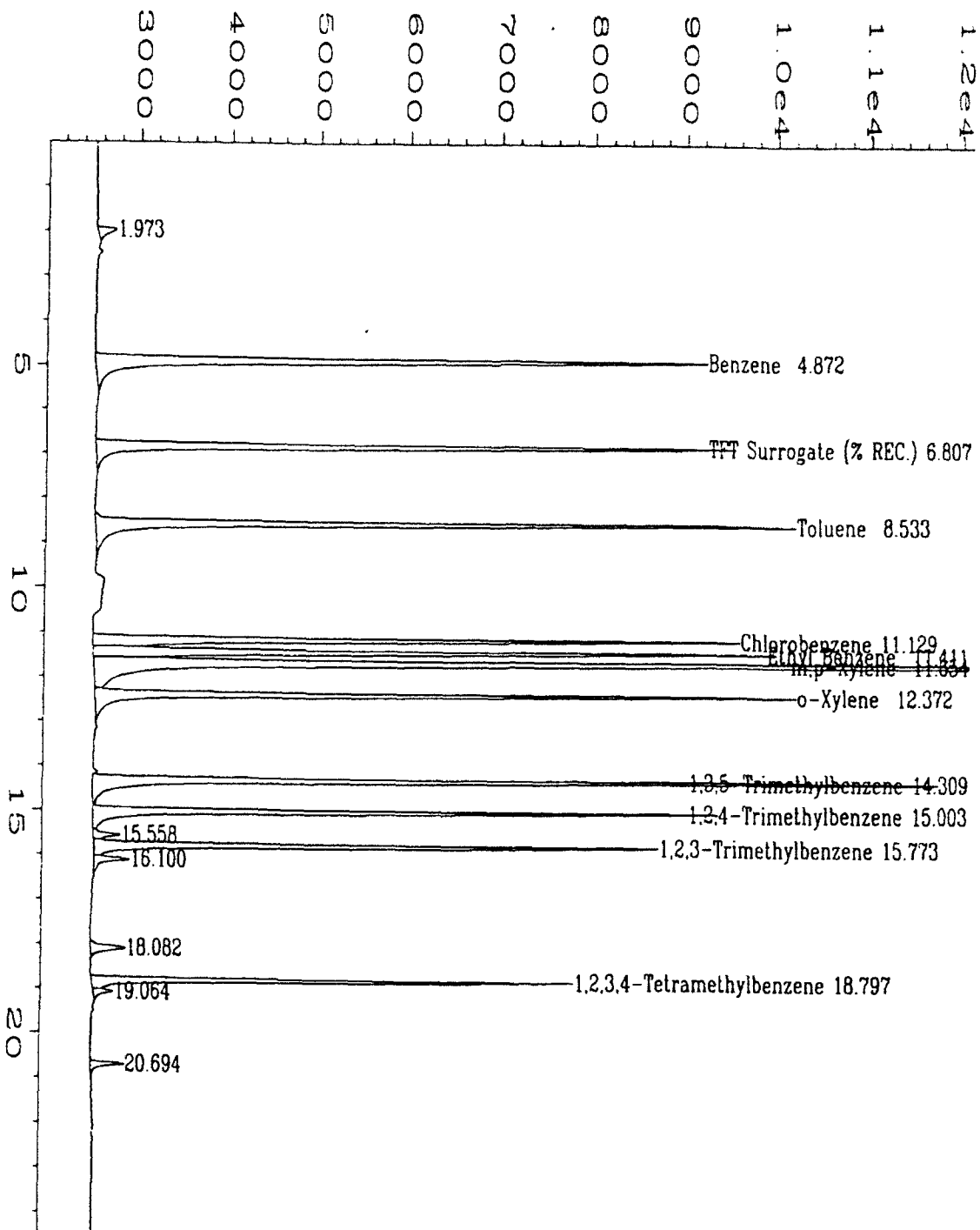
Sequence Line : 1

Instrument Method: BX20325 F

Analysis Method : BX20329.MT

Sample Amount : 0

ISTD Amount :



Data File Name	: C:\HPCHEM\2\DATA\BX20329\027R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 27
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04571MSD;5;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20329.MTH
quired on	: 30 Mar 95 07:41 AM	Analysis Method	: BX20329B.MTH
Report Created on:	18 Apr 95 00:18 AM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.21020
Lab Sample Number	: X04573		MacDill AFB
Date Sampled	: NA	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/29/95	Method	: 602
Date Analyzed	: 3/30/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032922
% Moisture	: NA	Method Blank No.	: MB032995

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 82% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

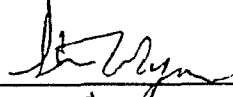
B = Compound found in blank and sample. Compare blank and sample data.

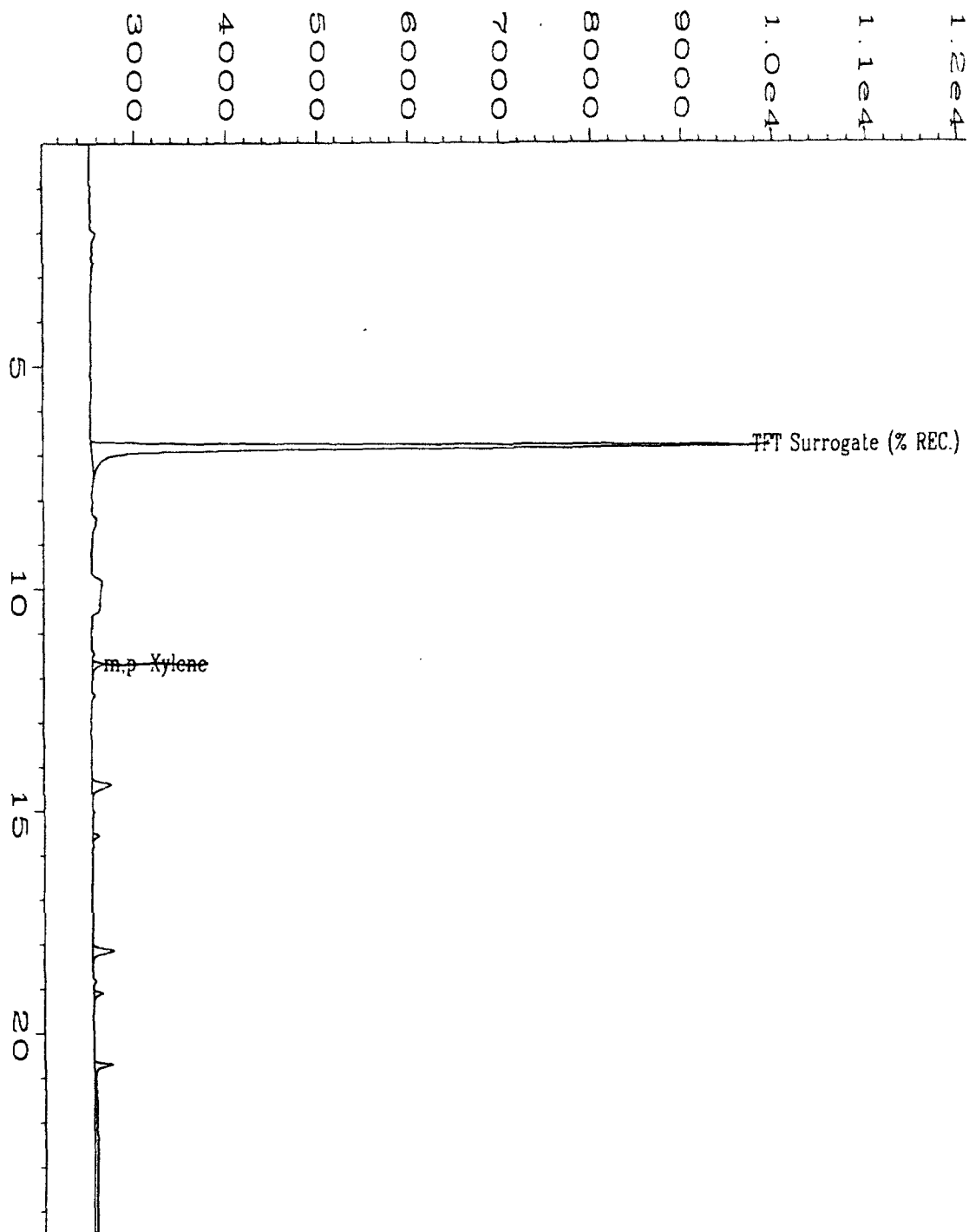
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20329\022R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 22
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04573;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20329.MTH
Acquired on	: 30 Mar 95 03:43 AM	Analysis Method	: BX20329B.MTH
Report Created on:	17 Apr 95 09:48 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915 Client#: Trip Blank Water		

pm 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Matrix Spike 3/20	Client Project No.	: 722450.21020
Lab Sample Number	: X04571	MacDill AFB	
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 5.00
Date Extracted/Prepared	: 3/30/95	Method	: 8020
Date Analyzed	: 3/31/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2033019
% Moisture	: 23.58%	Method Blank No.	: MB033095

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	26
Toluene	108-88-3	U	26
Ethyl Benzene	100-41-4	U	26
Total Xylenes	1330-20-7	U	26
Chlorobenzene	108-90-7	U	26
1,3,5-trimethylbenzene	108-67-8	U	26
1,2,4-trimethylbenzene	95-63-6	U	26
1,2,3-trimethylbenzene	526-73-8	U	26
1,2,3,4-tetramethylbenzene	488-23-3	U	26

Surrogate Recovery (α,α,α -Trifluorotoluene): 82% 64%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Dry Weight Basis.

QUALIFIERS:

E = Extrapolated value

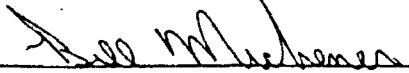
U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

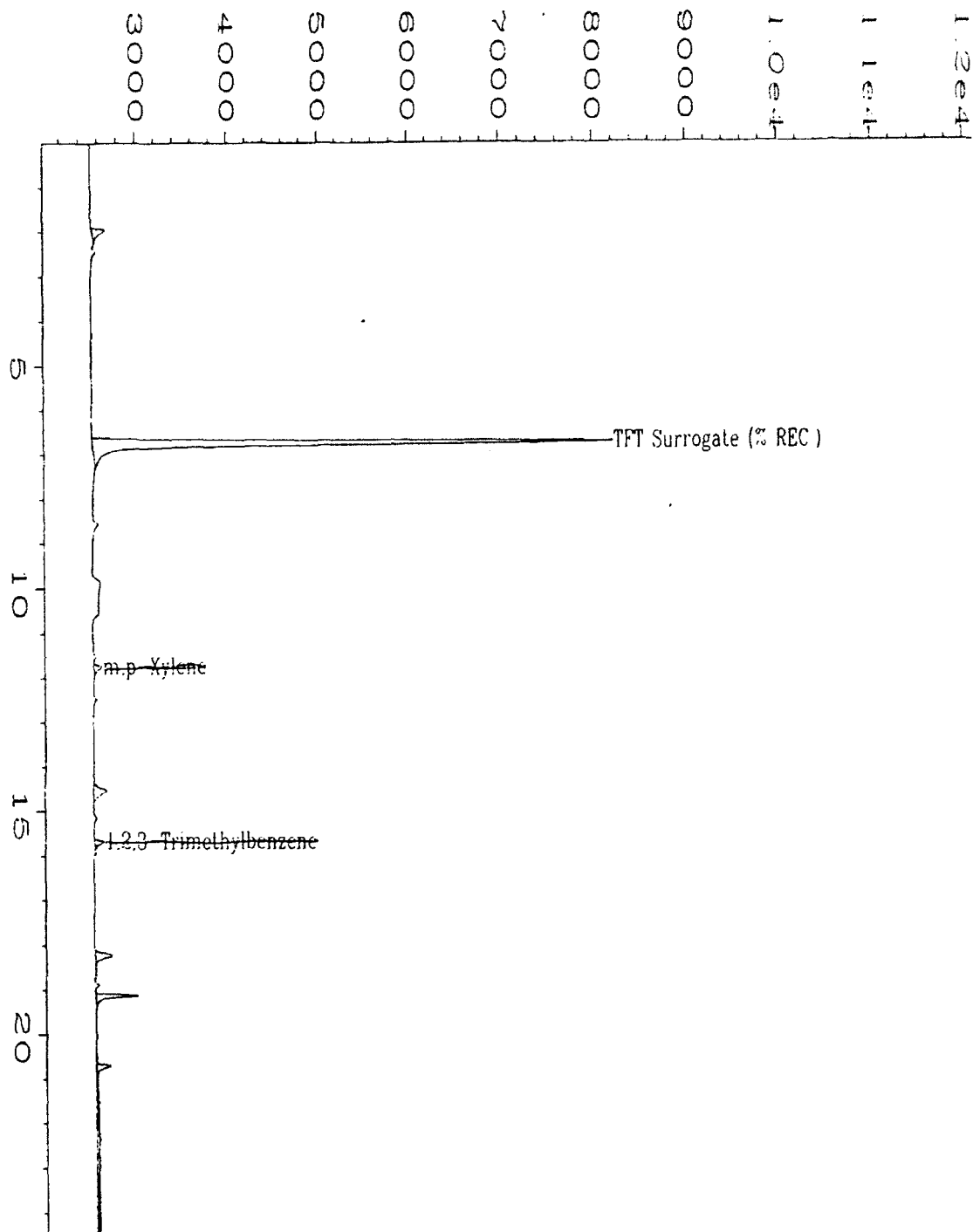
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20330\019R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 19
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04571;5;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20330.MTH
Acquired on	: 31 Mar 95 00:39 AM	Analysis Method	: BX20330.MTH
Report Created on:	31 Mar 95 08:47 AM	Sample Amount	: 0
Last Recalib on	: 31 MAR 95 08:24 AM	ISTD Amount	:
Multiplier	: 5		
Sample Info	: Project#: 95-0915 Client#: Matrix Spike 3/20	Soil	

pm 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Matrix Spike 3/20	Client Project No.	: 722450.21020
Lab Sample Number	: X04571DUP	MacDill AFB	
Date Sampled	: 3/20/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 5.00
Date Extracted/Prepared	: 3/30/95	Method	: 8020
Date Analyzed	: 3/31/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2033020
% Moisture	: 23.58%	Method Blank No.	: MB033095

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	26
Toluene	108-88-3	U	26
Ethyl Benzene	100-41-4	U	26
Total Xylenes	1330-20-7	U	26
Chlorobenzene	108-90-7	U	26
1,3,5-trimethylbenzene	108-67-8	U	26
1,2,4-trimethylbenzene	95-63-6	U	26
1,2,3-trimethylbenzene	526-73-8	U	26
1,2,3,4-tetramethylbenzene	488-23-3	U	26

Surrogate Recovery (α,α,α -Trifluorotoluene):	80%	64%-130% (QC limits)
---	-----	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Dry Weight Basis.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

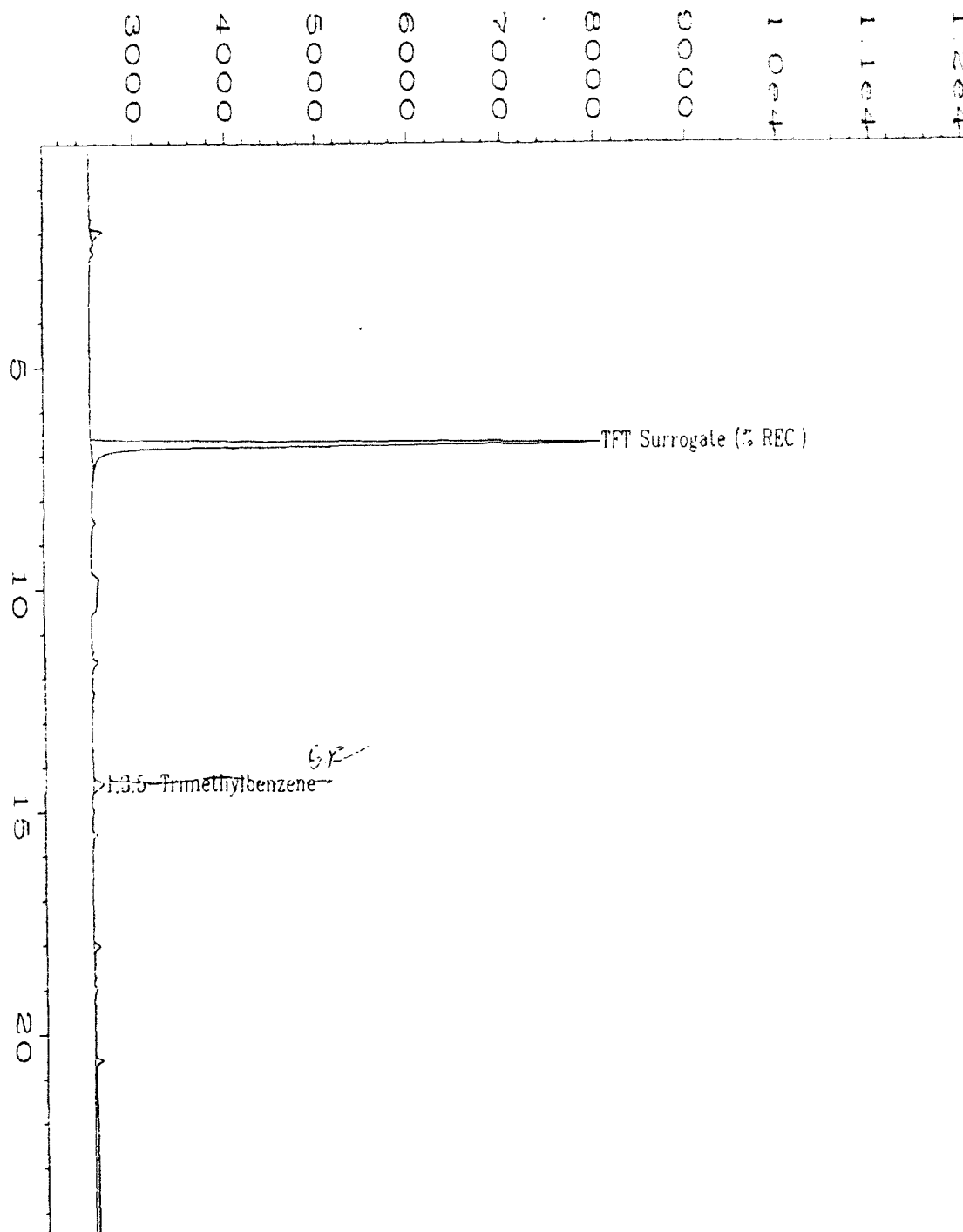
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20330\020R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04571DUP;5;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20330.MTH
quired on	: 31 Mar 95 01:23 AM	Analysis Method	: BX20330.MTH
port Created on:	: 31 Mar 95 08:47 AM	Sample Amount	: 0
Last Recalib on	: 31 MAR 95 08:24 AM	ISTD Amount	:
Multiplier	: 5		
Sample Info	: Project#: 95-0915 Client#: Matrix Spike 3/20 Soil		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Matrix Spike 3/17	Client Project No.	: 722450.21020
Lab Sample Number	: X04565		MacDill AFB
Date Sampled	: 3/17/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/28/95	Method	: 8020
Date Analyzed	: 3/28/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2032816
% Moisture	: 17.63%	Method Blank No.	: MEB032895

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.9
Toluene	108-88-3	U	4.9
Ethyl Benzene	100-41-4	U	4.9
Total Xylenes	1330-20-7	U	4.9
Chlorobenzene	108-90-7	U	4.9
1,3,5-trimethylbenzene	108-67-8	U	4.9
1,2,4-trimethylbenzene	95-63-6	U	4.9
1,2,3-trimethylbenzene	526-73-8	U	4.9
1,2,3,4-tetramethylbenzene	488-23-3	U	4.9

Surrogate Recovery (α,α,α -Trifluorotoluene):	103%	64%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Dry Weight Basis.

QUALIFIERS:

E = Extrapolated value

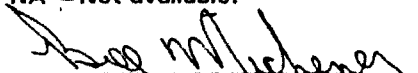
U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

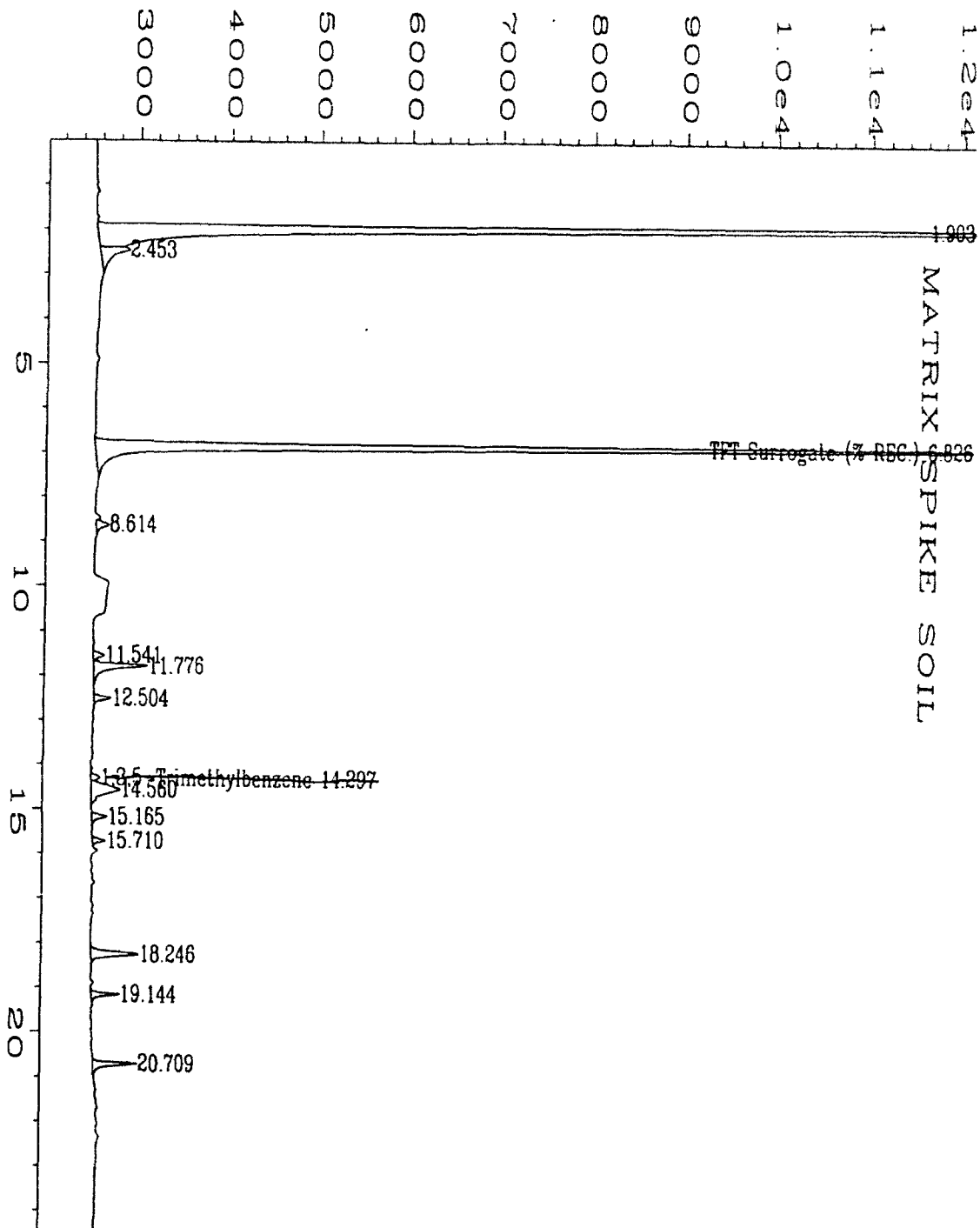
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20328\016R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04565;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20328.MTH
quired on	: 28 Mar 95 09:58 PM	Analysis Method	: BX20328B.MTH
Report Created on:	: 18 Apr 95 01:10 AM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

pm 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Matrix Spike 3/17	Client Project No.	: 722450.21020
Lab Sample Number	: X04565DUP		MacDill AFB
Date Sampled	: 3/17/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/28/95	Method	: 8020
Date Analyzed	: 3/28/95	Matrix	: Soil
Methanol Extract?	: No	Lab File No.	: BX2032817
% Moisture	: 17.63%	Method Blank No.	: MEB032895

Compound Name	Cas Number	Sample Concentration* ug/kg	PQL* ug/kg
Benzene	71-43-2	U	4.9
Toluene	108-88-3	U	4.9
Ethyl Benzene	100-41-4	U	4.9
Total Xylenes	1330-20-7	2.0 JB	4.9
Chlorobenzene	108-90-7	U	4.9
1,3,5-trimethylbenzene	108-67-8	U	4.9
1,2,4-trimethylbenzene	95-63-6	U	4.9
1,2,3-trimethylbenzene	526-73-8	U	4.9
1,2,3,4-tetramethylbenzene	488-23-3	U	4.9

Surrogate Recovery (α,α,α -Trifluorotoluene): 111% 64%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.

The Xylene PQL is for a single peak.

* = Dry Weight Basis.

QUALIFIERS:

E = Extrapolated value

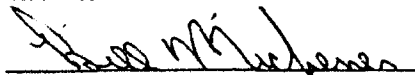
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

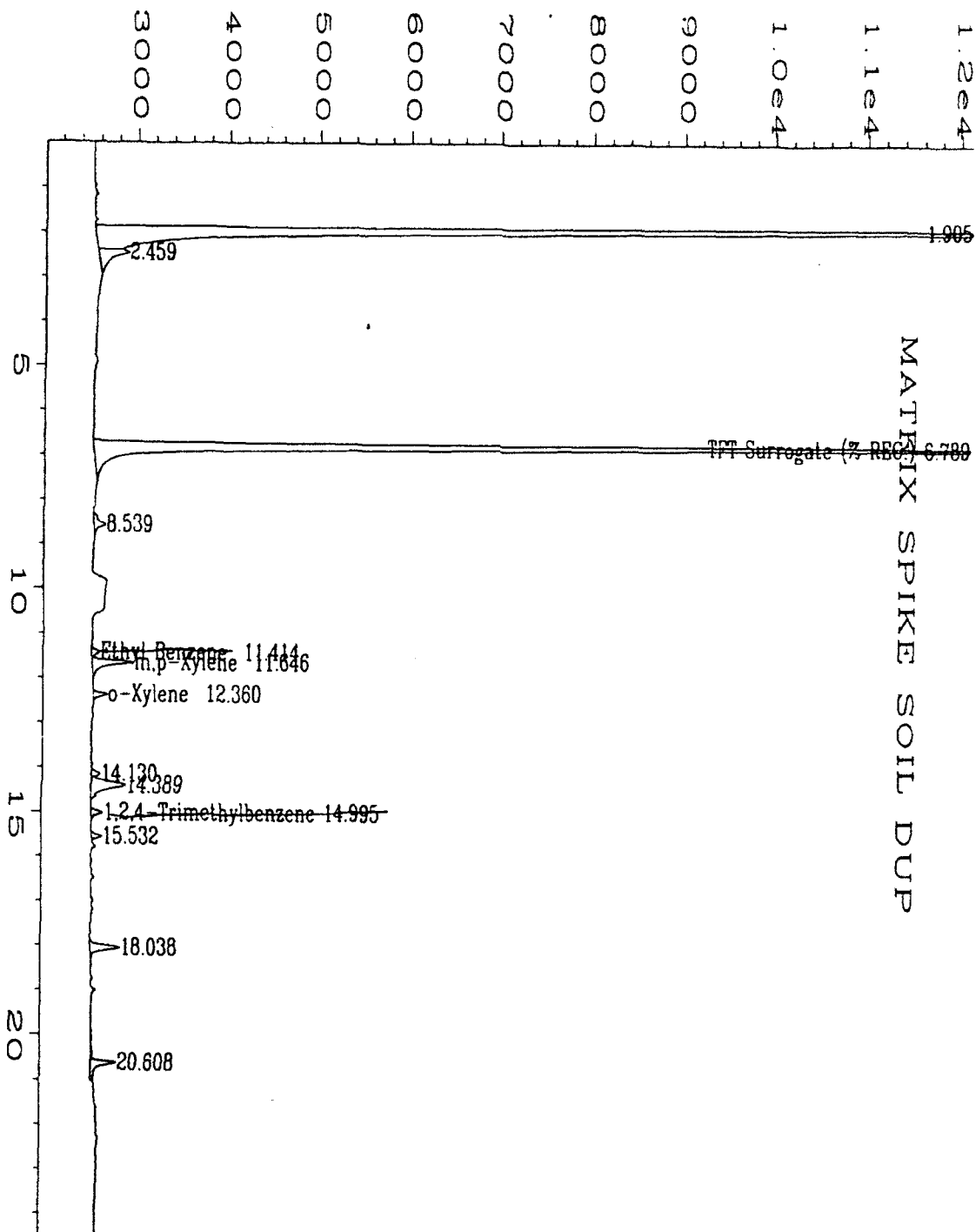
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20328\017R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04565DUP;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20328.MTH
quired on	: 28 Mar 95 10:46 PM	Analysis Method	: BX20328B.MTH
Report Created on:	: 18 Apr 95 01:11 AM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

pm 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Rinsate Blank	Client Project No.	: 722450.21020
Lab Sample Number	: X04559		MacDill AFB
Date Sampled	: 3/17/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/30/95	Method	: 602
Date Analyzed	: 3/30/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2033015
% Moisture	: NA	Method Blank No.	: MB033095

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α ,c, α -Trifluorotoluene):	93%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

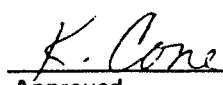
B = Compound found in blank and sample. Compare blank and sample data.

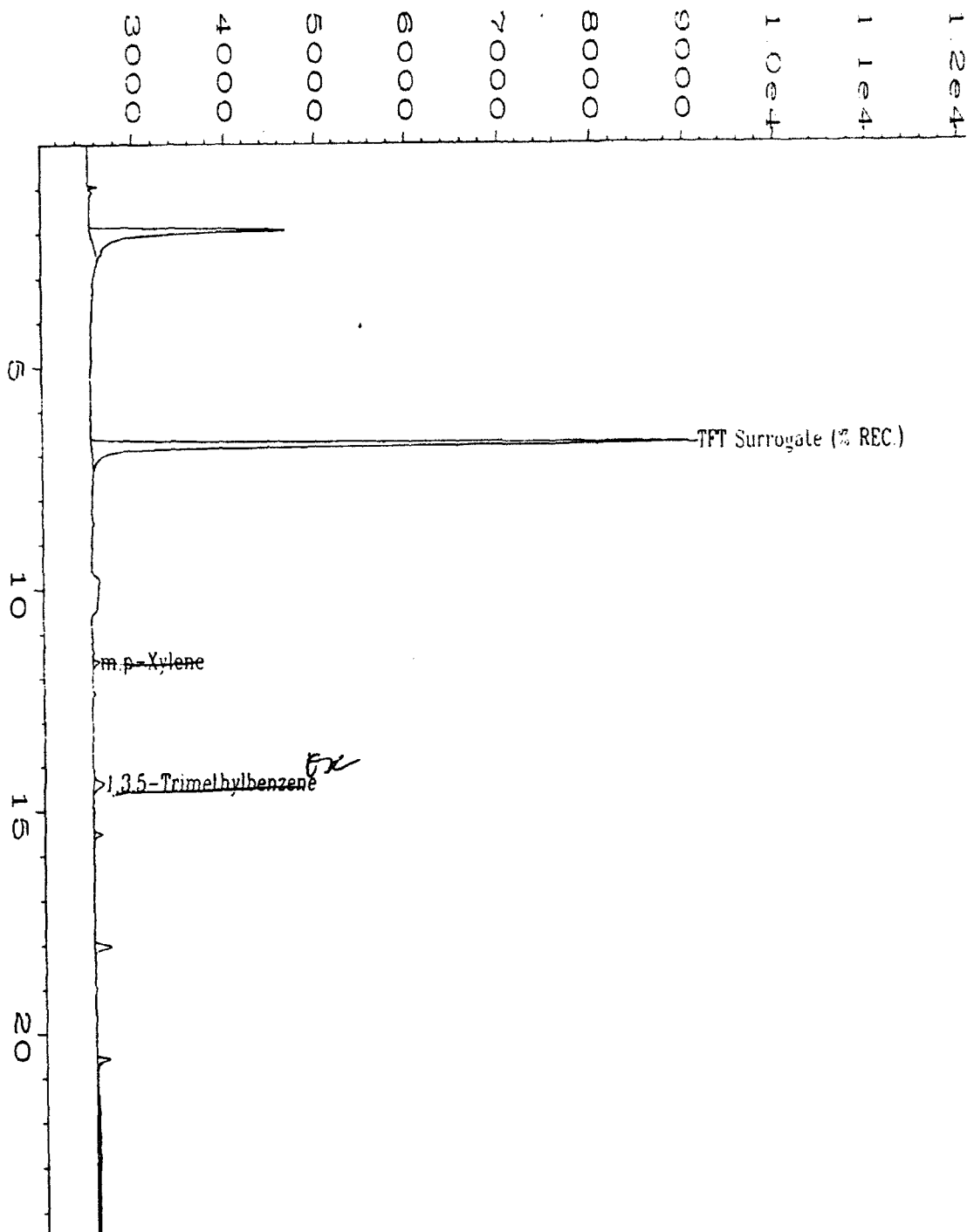
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20330\015R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04559;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20330.MTH
Acquired on	: 30 Mar 95 09:41 PM	Analysis Method	: BX20330.MTH
Report Created on	: 31 Mar 95 08:45 AM	Sample Amount	: 0
Last Recalib on	: 31 MAR 95 08:24 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915 Client#: Rinsate Blank Water		

pm 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.21020
Lab Sample Number	: X04556		MacDill AFB
Date Sampled	: 3/17/95	Lab Project No.	: 95-0915
Date Received	: 3/22/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/27/95	Method	: 602
Date Analyzed	: 3/27/95	Matrix	: Water
Methanol Extract?	: No	Lab File No.	: BX2032713
% Moisture	NA	Method Blank No.	: MB032795

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 95% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

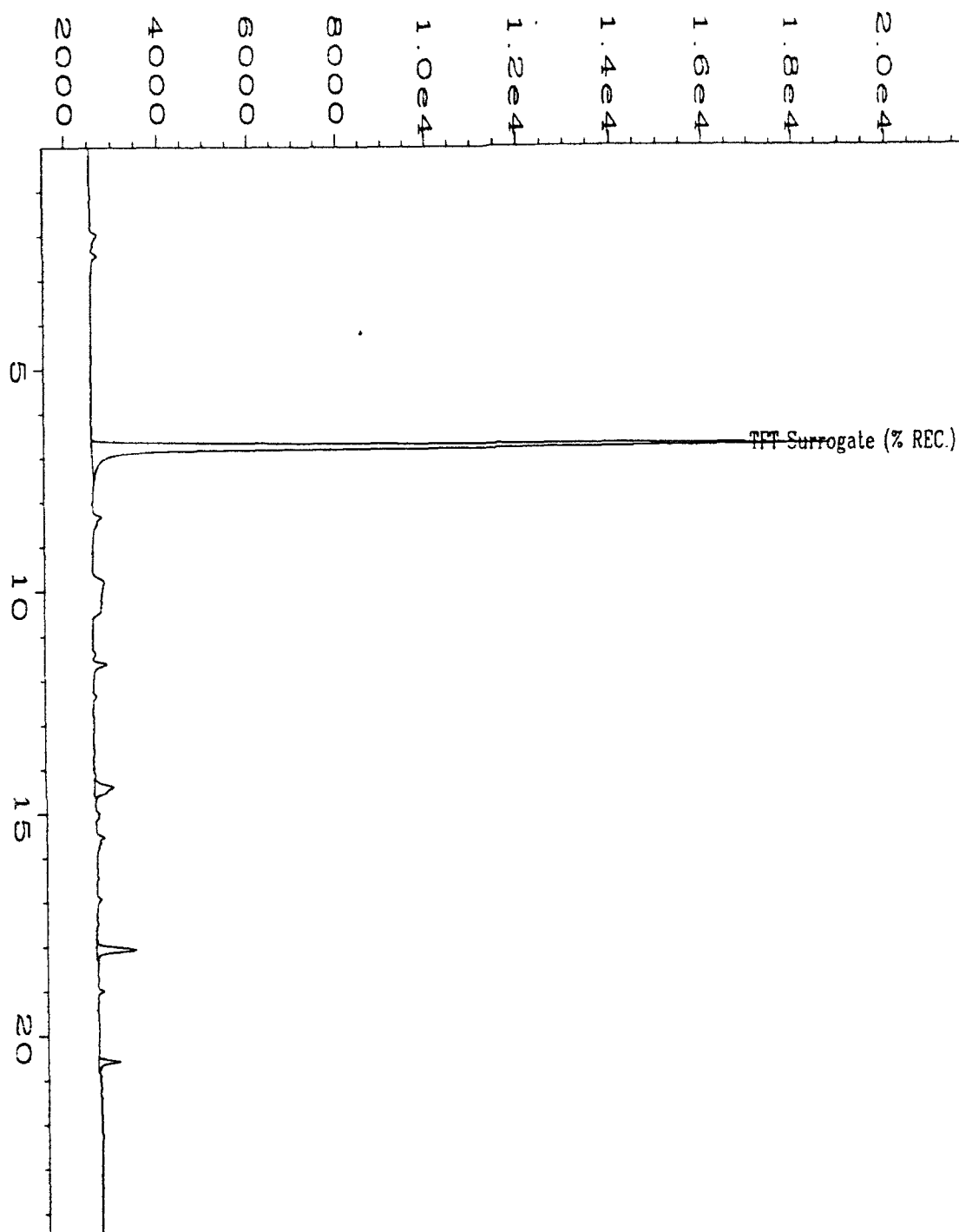
NA = Not available.

Analyst

K. Cone

Approved

P. McCall



Data File Name	: C:\HPCHEM\2\DATA\BX20327\013R0601.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X04556;1;5	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	BX20327.MTH
quired on	: 27 Mar 95 07:33 PM	Analysis Method	: BX20327A.MTH
Report Created on:	17 Apr 95 12:35 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-0915 Client#: Trip Blank Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB032595	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/25/95	MacDill AFB	
Date Analyzed	: 3/25/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2032509

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	102%	70%-130% (QC limits)
---	------	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

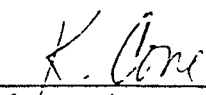
B = Compound found in blank and sample. Compare blank and sample data.

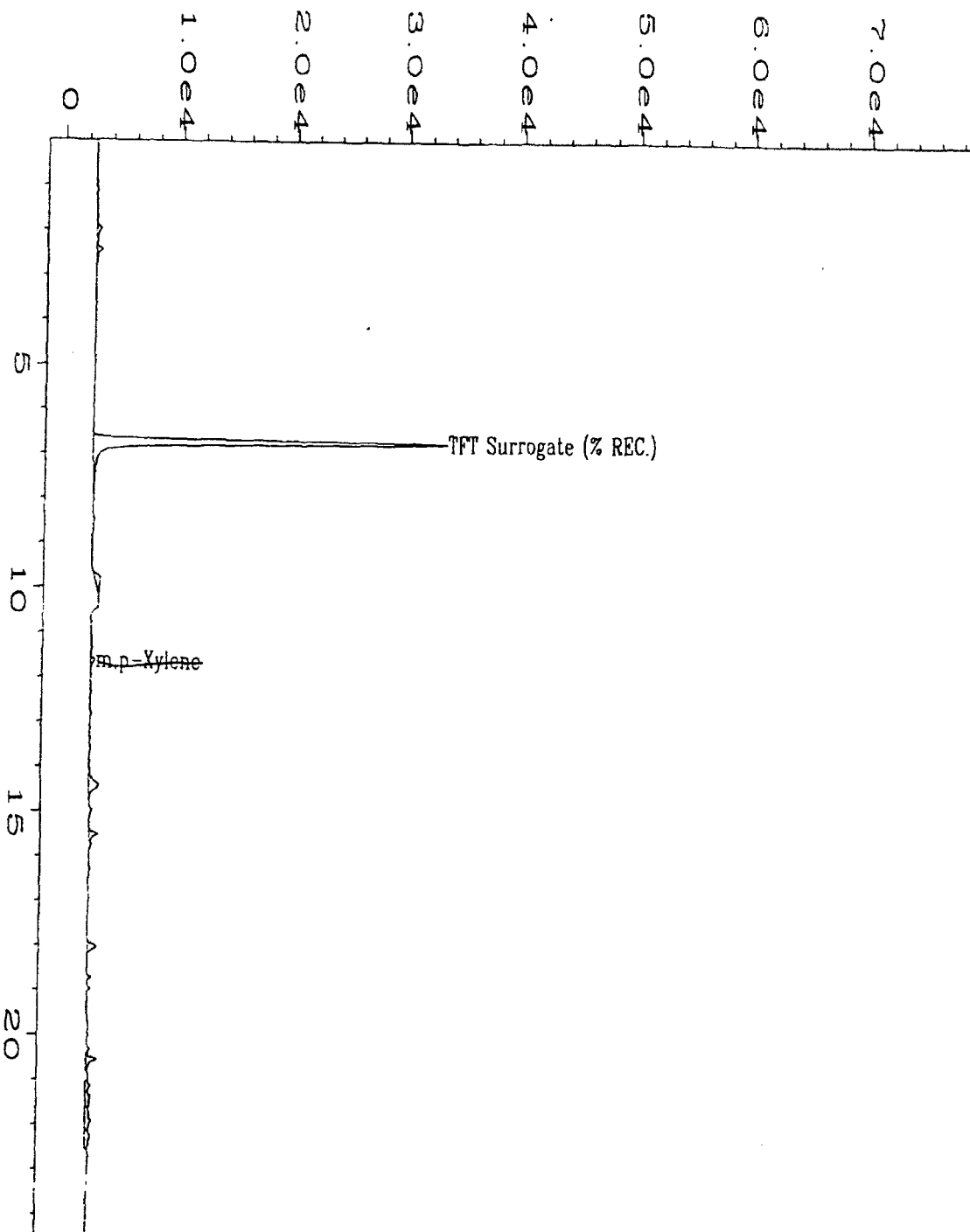
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\009R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 9
Instrument	: BTEX2 5	Injection Number	: 1
Sample Name	: MB032495-WATER	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20325.MTH
uired on	: 25 Mar 95 07:23 PM	Analysis Method	: BX20325A.MTH
port Created on:	: 17 Apr 95 01:01 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

pm 4/17/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB032695B	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/26/95	MacDill AFB	
Date Analyzed	: 3/26/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2032610

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	0.4 J	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	111%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

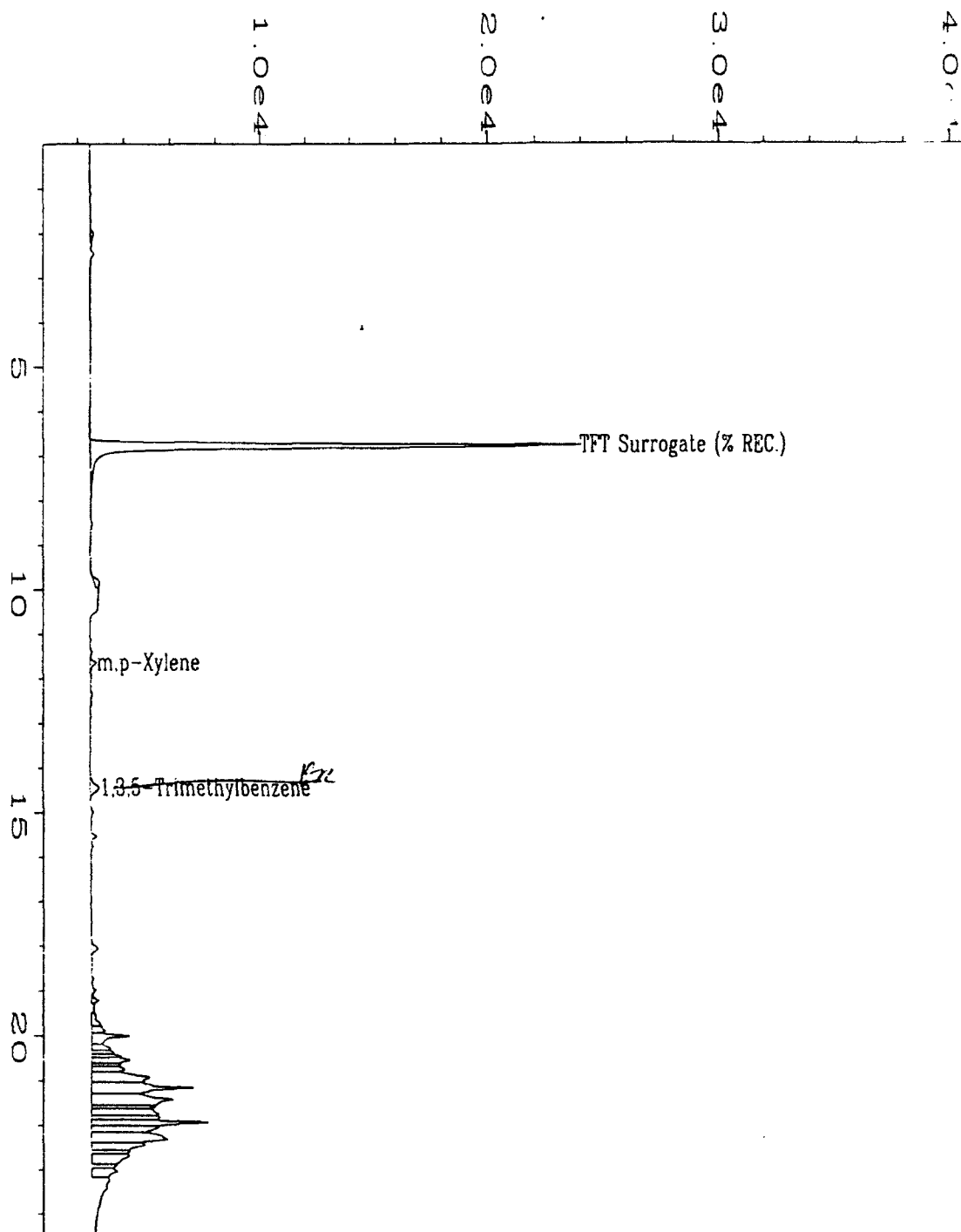
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.

K. Cone
Analyst

F. McCella
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20326\010R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: Blank MB032695B	Sequence Line	: 8
Run Time Bar Code:	<i>for</i>	Instrument Method	: BX20326.MTH
Acquired on	: 26 Mar 95 06:45 PM	Analysis Method	: BX20326A.MTH
Report Created on	: 17 Apr 95 02:05 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB032795	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/27/95	MacDill AFB	
Date Analyzed	: 3/27/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2032709

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	98%	70%-130% (QC limits)
---	-----	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

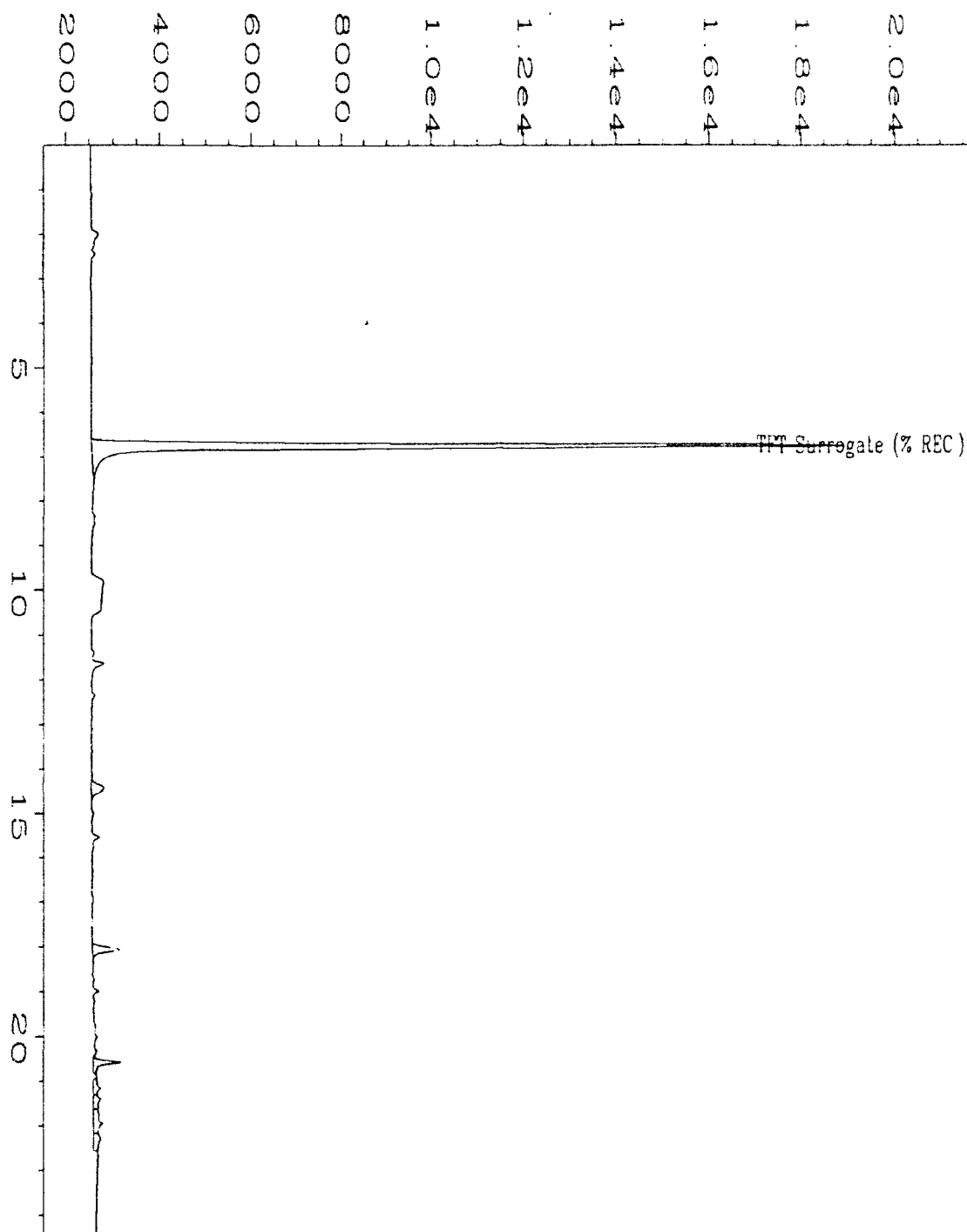
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20327\009R0601.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB032795-WATER	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: BX20327.MTH
quired on	: 27 Mar 95 04:37 PM	Analysis Method	: BX20327A.MTH
Report Created on:	: 17 Apr 95 12:34 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB032895	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/28/95	MacDill AFB	
Date Analyzed	: 3/28/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: BX2032809

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	61% *	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

* SEE MB032895 also.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

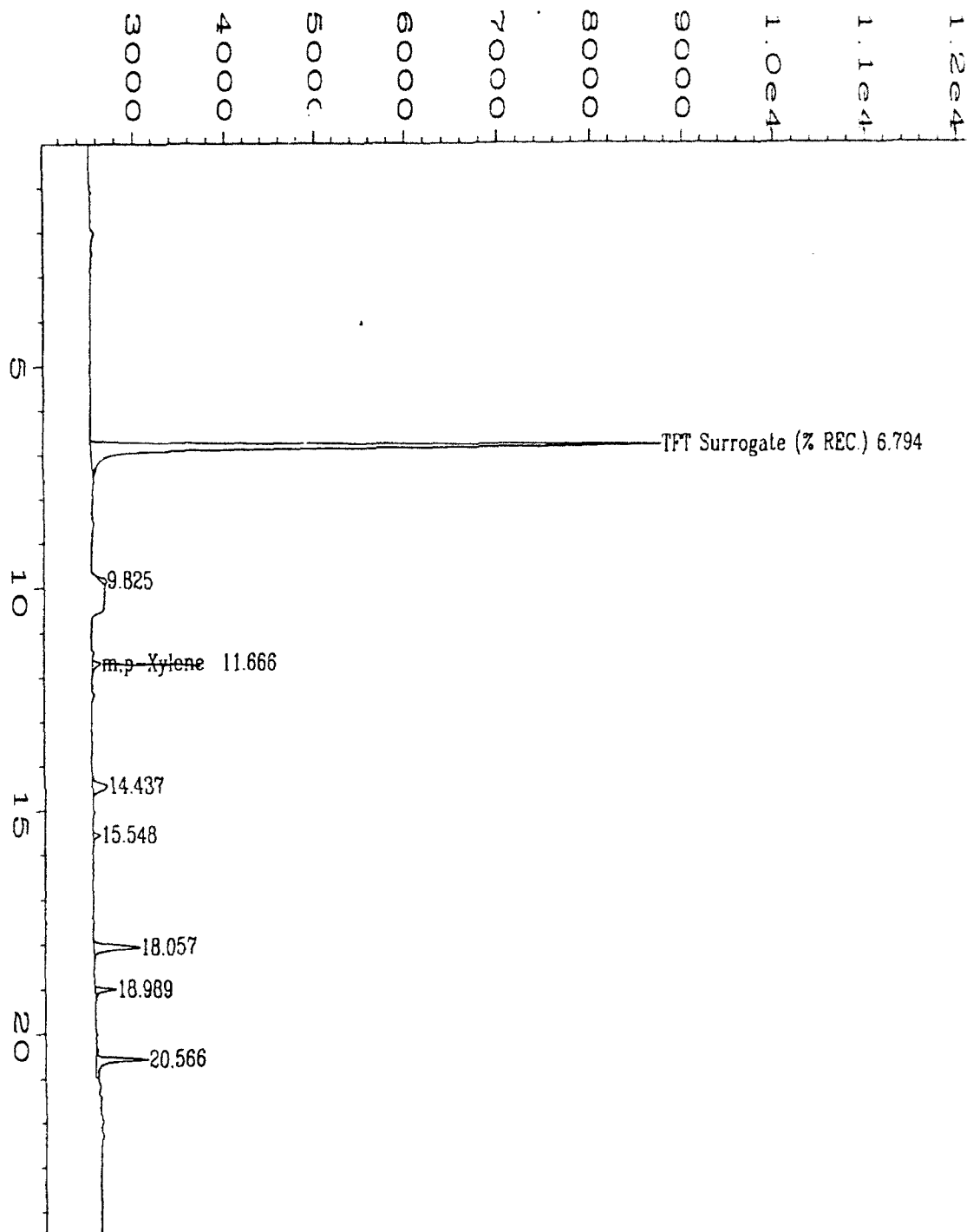
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20328\009R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB032895-WATER	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20328.MTH
Acquired on	: 28 Mar 95 04:21 PM	Analysis Method	: BX20328B.MTH
Report Created on	: 18 Apr 95 01:05 AM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

222 4/19/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MEB032895	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/28/95	MacDill AFB	
Date Analyzed	: 3/29/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: MeOH/Water
		Lab File No.	: BX2032820

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	0.8 J	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	97%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

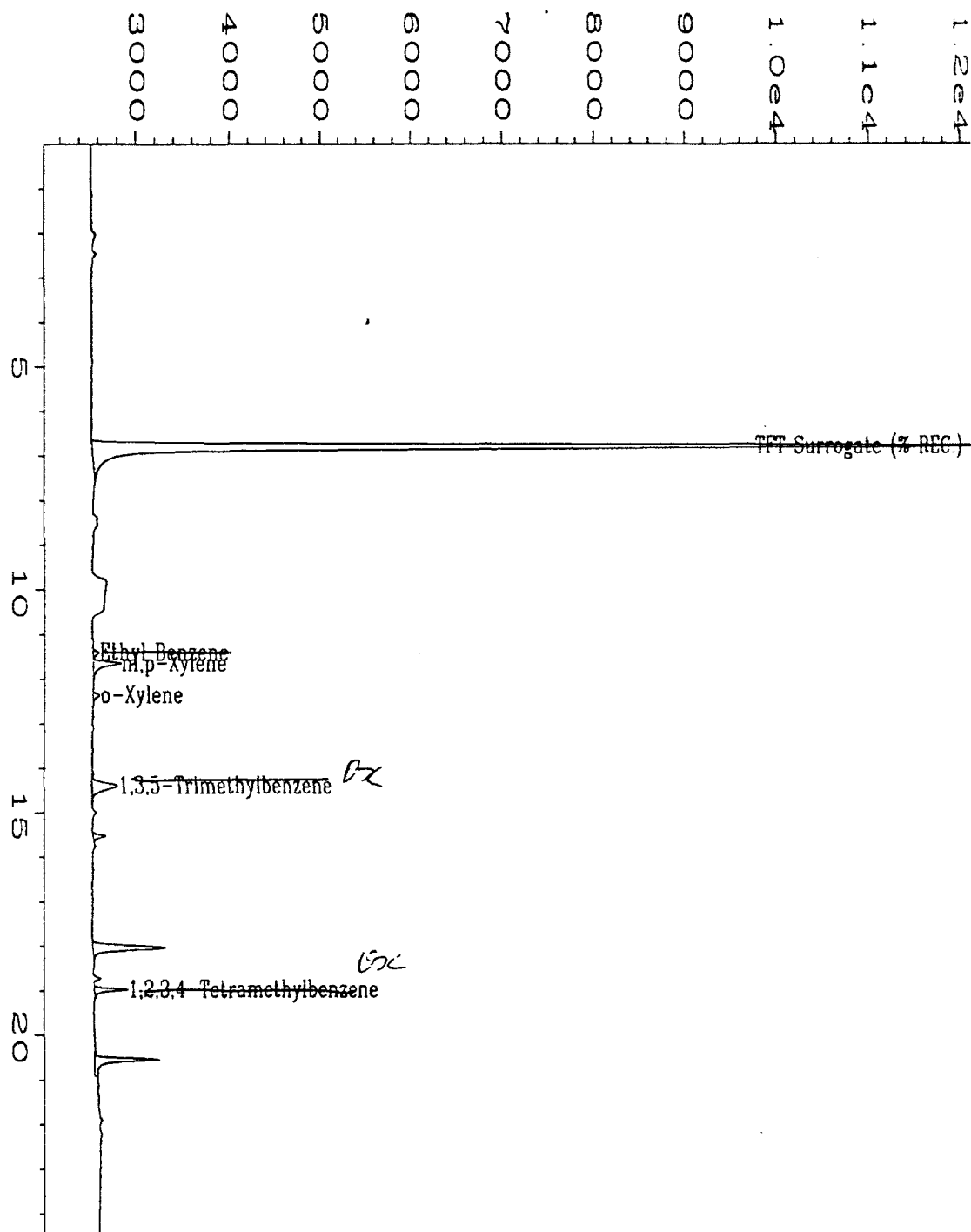
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20328\020R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB032895	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20328.MTH
Acquired on	: 29 Mar 95 01:06 AM	Analysis Method	: BX20328B.MTH
Report Created on	: 18 Apr 95 01:00 AM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MEB032995	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/29/95	MacDill AFB	
Date Analyzed	: 3/30/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: MeOH/Water
		Lab File No.	: BX2032923

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	0.6 J	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	79%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

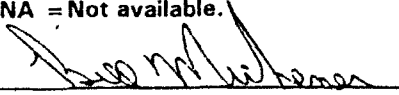
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

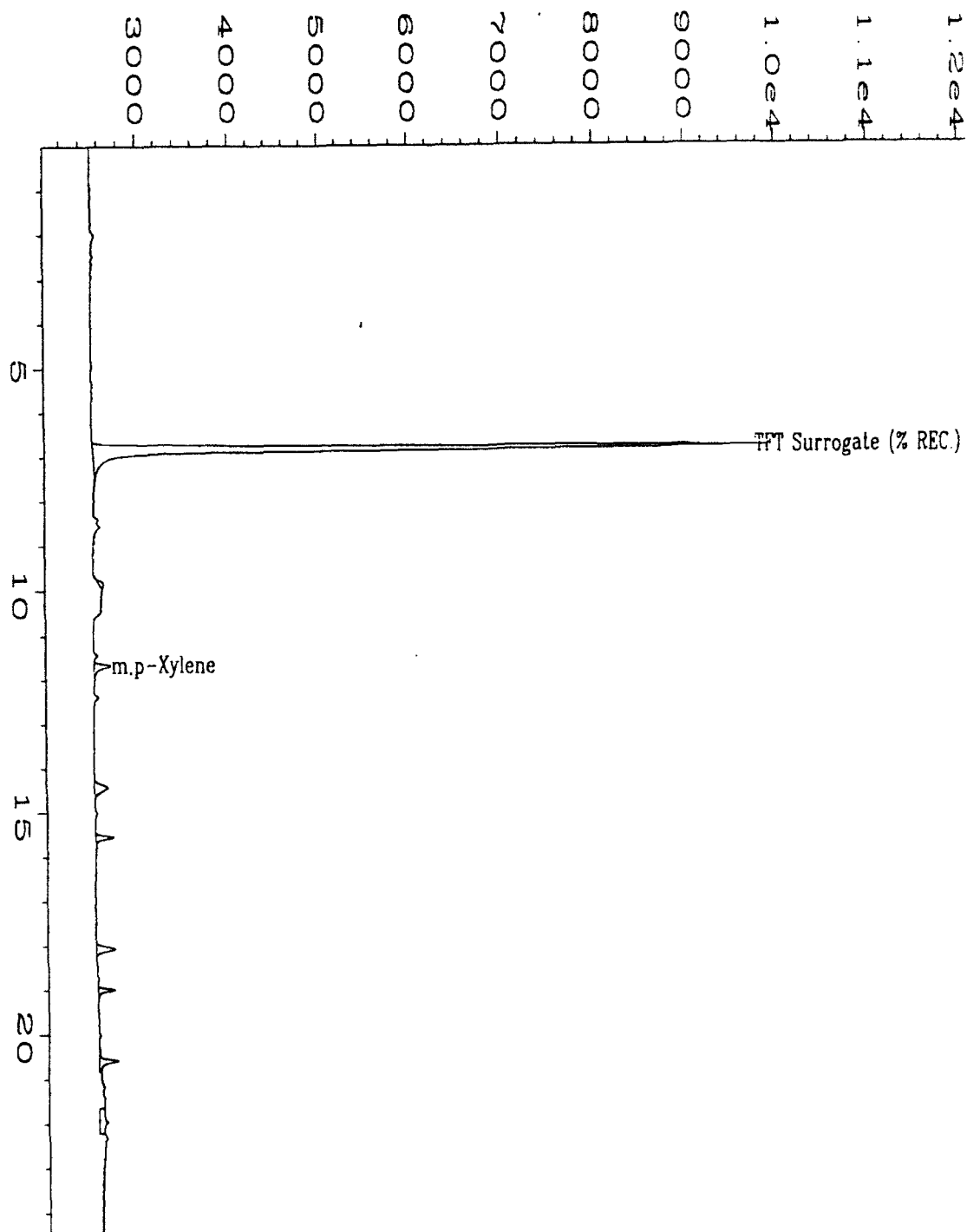
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name : C:\HPCHEM\2\DATA\BX20329\023R0101.D

Operator : C.J. Cook

Instrument : BTEX2

Sample Name : MEB032995

Run Time Bar Code:

Acquired on : 30 Mar 95 04:31 AM

Report Created on: 17 Apr 95 09:49 PM

Last Recalib on : 14 APR 95 00:39 AM

Multiplier : 1

Page Number : 1

Vial Number : 23

Injection Number : 1

Sequence Line : 1

Instrument Method: BX20329.MTH

Analysis Method : BX20329B.MTH

Sample Amount : 0

ISTD Amount :

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(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB032995	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/29/95	MacDill AFB	
Date Analyzed	: 3/29/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 8020/602
		Matrix	: Water
		Lab File No.	: BX2032909

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	0.8 J	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	101%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

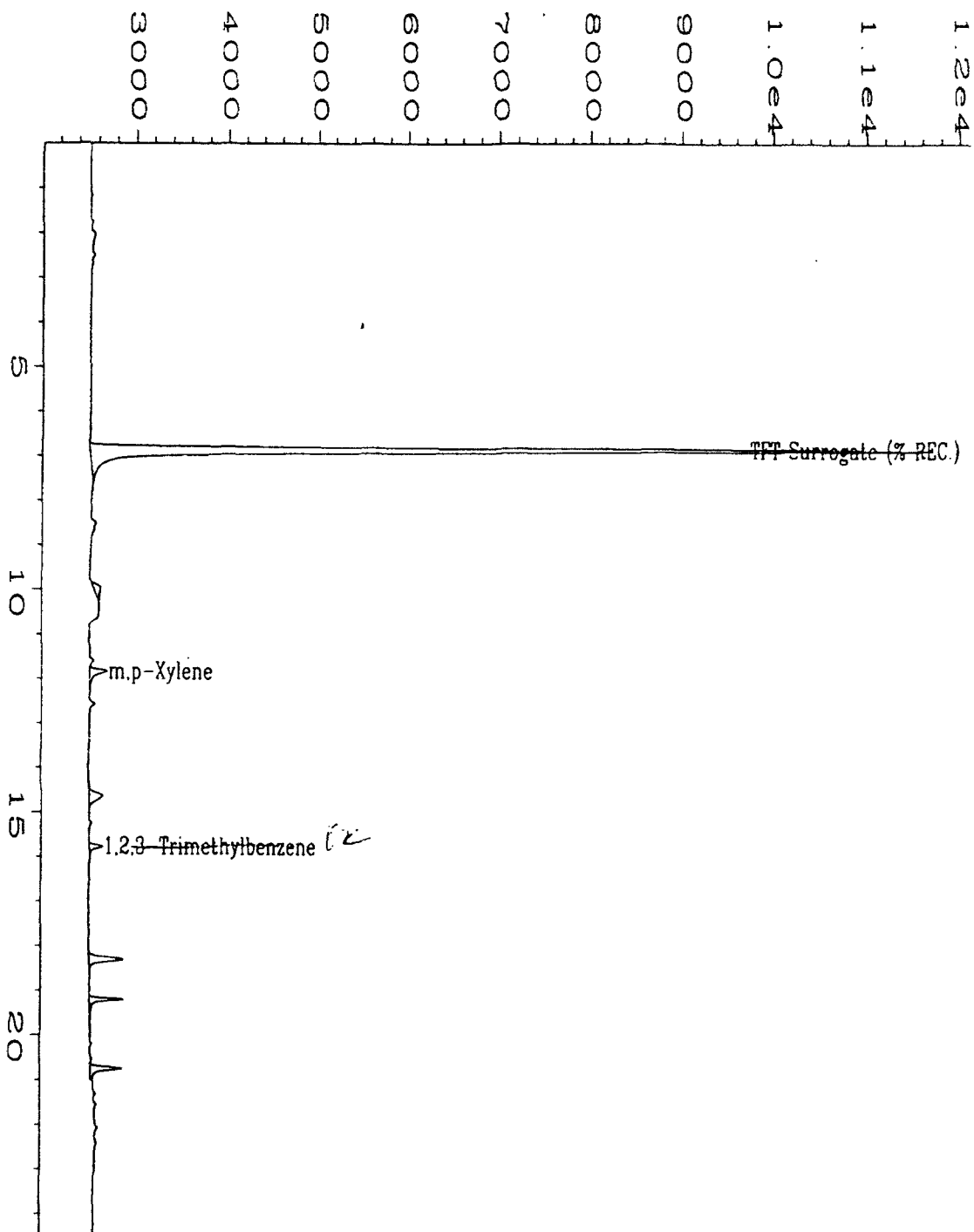
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20329\009R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB032995-WATER	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20329.MTH
quired on	: 29 Mar 95 05:06 PM	Analysis Method	: BX20329B.MTH
Report Created on:	: 17 Apr 95 09:41 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

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(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MB033095	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/30/95	MacDill AFB	
Date Analyzed	: 3/30/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 602
		Matrix	: Water
		Lab File No.	: NV-R0115

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	U	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	91%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value


U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

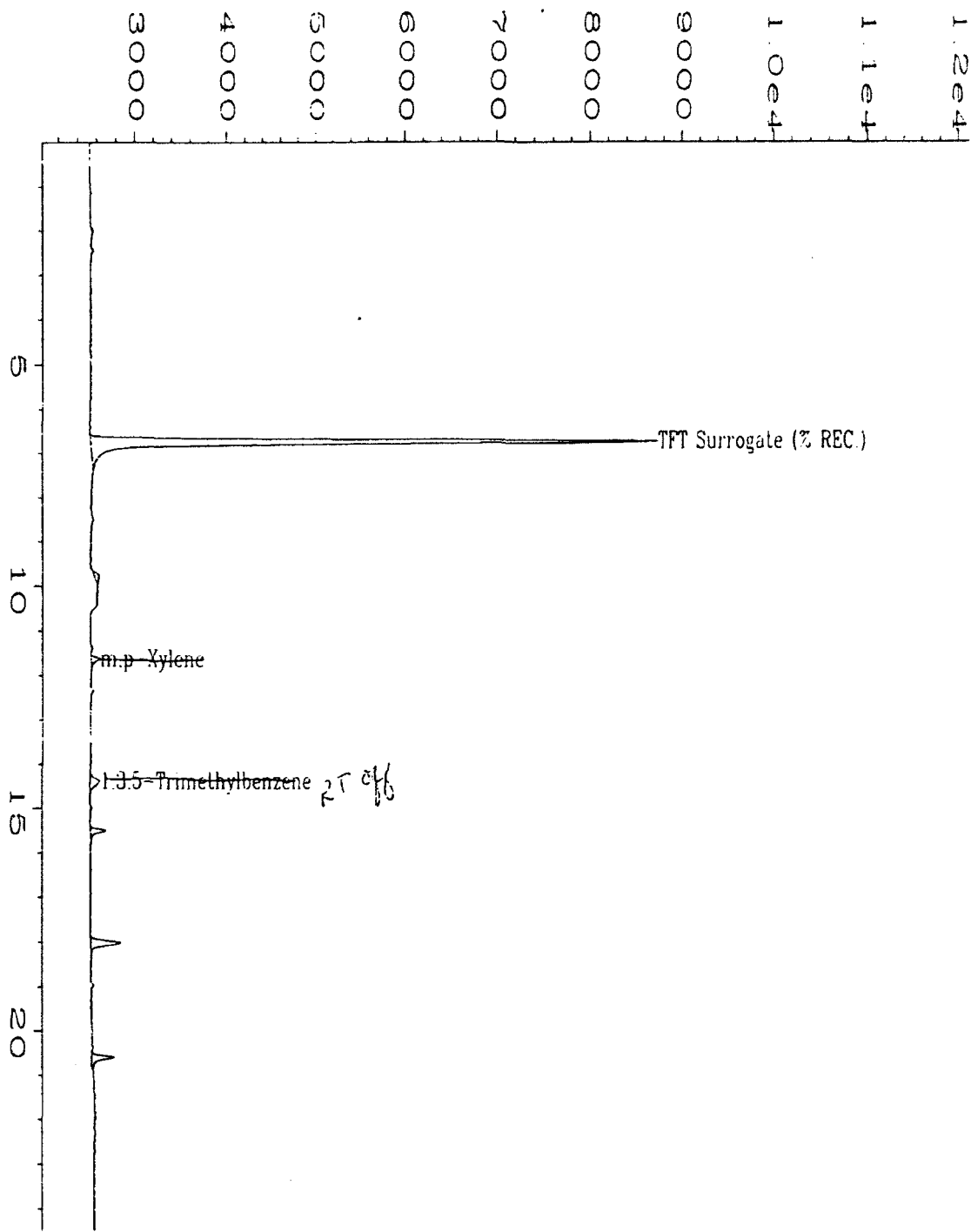
PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.



Analyst


Approved



Data File Name : C:\HPCHEM\2\DATA\NV-R0115.D
 Operator :
 Instrument : BTEX2
 Sample Name : MB033095 - WATER
 n Time Bar Code:
 quired on : 30 Mar 95 05:18 PM
 Report Created on: 31 Mar 95 08:50 AM
 Last Recalib on : 31 MAR 95 08:24 AM
 Multiplier : 1

Page Number : 1
 Vial Number :
 Injection Number :
 Sequence Line :
 Instrument Method: BX20330.MTH
 Analysis Method : BX20330.MTH
 Sample Amount : 0
 ISTD Amount :

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Method Blank Report

Method Blank Number	: MEB033095	Client Project No.	: 722450.21020
Date Extracted/Prepared	: 3/30/95	MacDill AFB	
Date Analyzed	: 3/30/95	Lab Project No.	: 95-0915
		Dilution Factor	: 1.00
		Method	: 8020
		Matrix	: MeOH/Water
		Lab File No.	: BX2033017

Compound Name	Cas Number	Sample Concentration ug/L	PQL ug/L
Benzene	71-43-2	U	4.0
Toluene	108-88-3	U	4.0
Ethyl Benzene	100-41-4	U	4.0
Total Xylenes	1330-20-7	U	4.0
Chlorobenzene	108-90-7	U	4.0
1,3,5-trimethylbenzene	108-67-8	U	4.0
1,2,4-trimethylbenzene	95-63-6	U	4.0
1,2,3-trimethylbenzene	526-73-8	2.1 J	4.0
1,2,3,4-tetramethylbenzene	488-23-3	U	4.0

Surrogate Recovery (α,α,α -Trifluorotoluene):	86%	70%-130% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene PQL is for a single peak.

QUALIFIERS:

E = Extrapolated value


U = Compound analyzed for, but not detected.


B = Compound found in blank and sample. Compare blank and sample data.

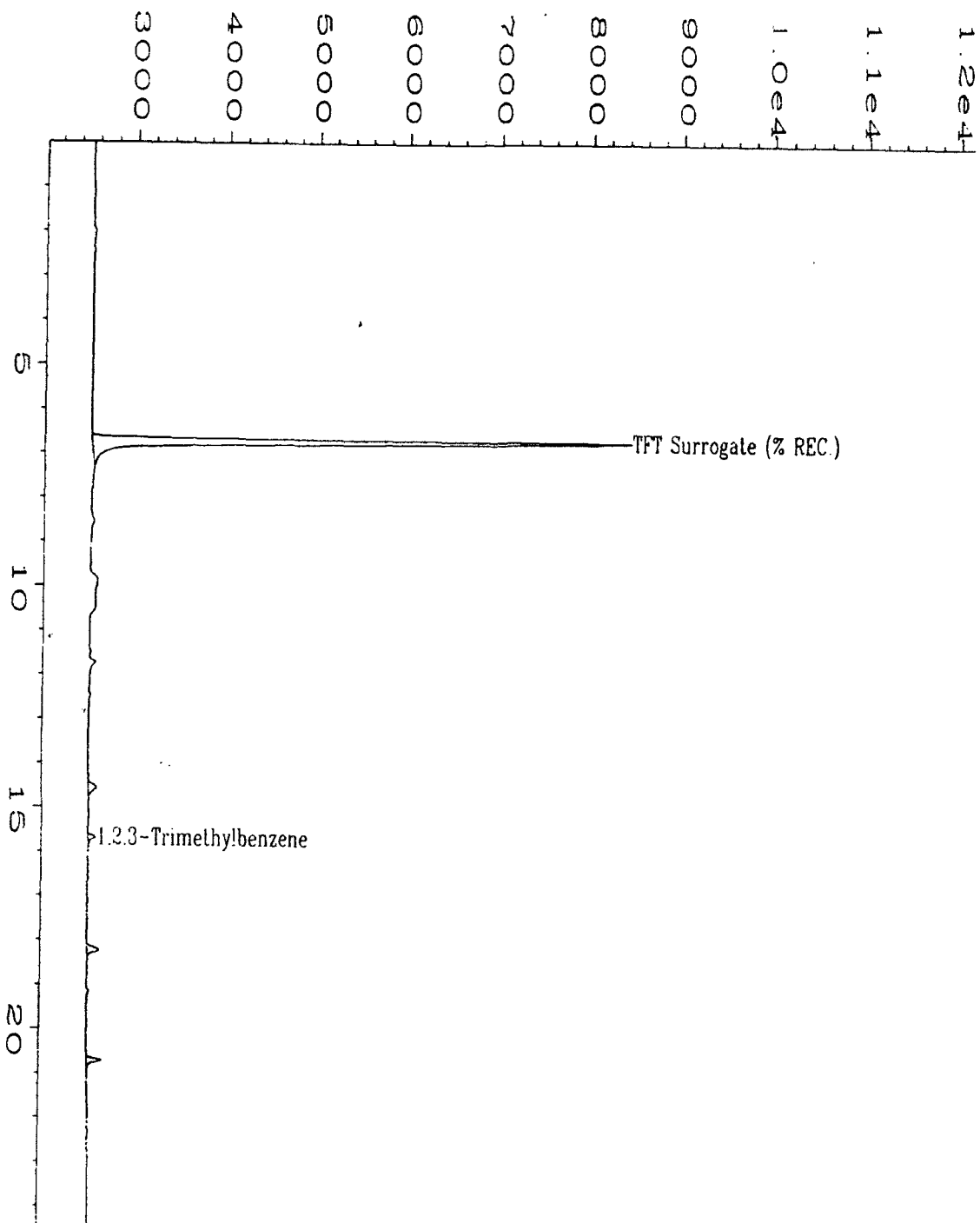
J = Indicates an estimated value when the compound is detected, but is below the Practical Quantitation Limit (PQL).

PQL = Practical Quantitation Limit. The PQL is equal to the dilution factor multiplied by ten times the Method Detection Limit as determined by EPA SW846, Vol. 1B, Part II, pa. 8000-14.

NA = Not available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20330\017R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB033095	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20330.MTH
quired on	: 30 Mar 95 11:11 PM	Analysis Method	: BX20330.MTH
Report Created on:	: 31 Mar 95 08:46 AM	Sample Amount	: 0
Last Recalib on	: 31 MAR 95 08:24 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS032595 Dilution Factor : 1.00
Date Extracted/Prepared : 3/25/95 Method : 602
Date Analyzed : 3/25/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2032511

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	15.4	77.0	71.0-119.0
Toluene	108-88-3	15.7	78.5	73.0-111.0
Chlorobenzene	108-90-7	16.5	82.5	64.0-119.0
Ethyl Benzene	100-41-4	15.9	79.5	75.0-114.0
m,p-Xylene	108-38-3	16.8	84.0	75.0-114.0
	106-42-3			
o-Xylene	95-47-6	15.7	78.5	64.0-111
1,3,5-Trimethylbenzene	108-67-8	16.9	84.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.8	89.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.2	101.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	16.6	83.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		97%	70%-130% (QC limits)	

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

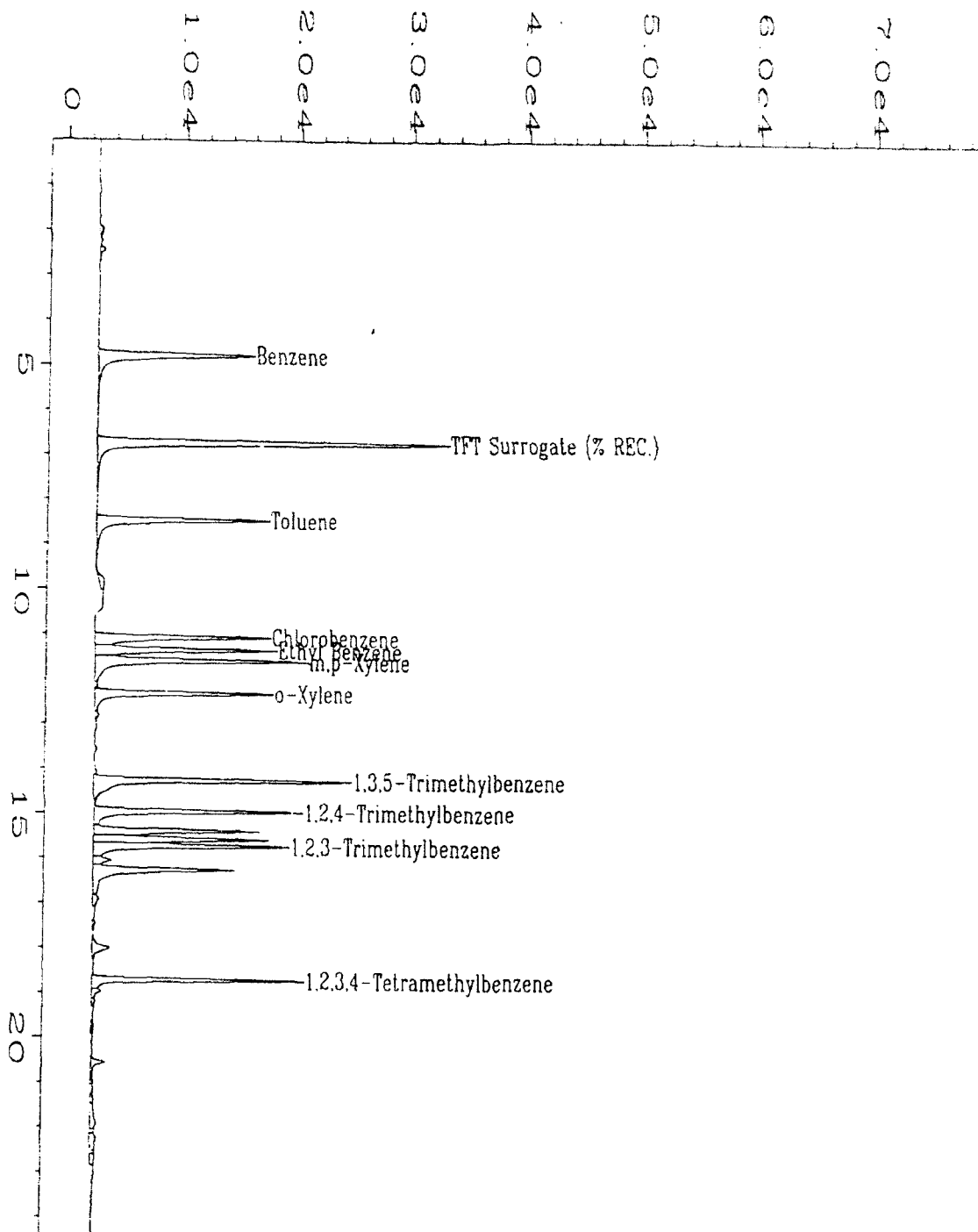
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

Amelia
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20325\011R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS032495	Sequence Line	: 8
Run Time Bar Code:	5 #2	Instrument Method	: BX20325.MTH
Acquired on	: 25 Mar 95 08:54 PM	Analysis Method	: BX20325A.MTH
Report Created on	: 17 Apr 95 01:02 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS032695	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/26/95	Method	: 602
Date Analyzed	: 3/26/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2032611

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.2	81.0	71.0-119.0
Toluene	108-88-3	16.4	82.0	73.0-111.0
Chlorobenzene	108-90-7	17.0	85.0	64.0-119.0
Ethyl Benzene	100-41-4	16.9	84.5	75.0-114.0
m,p-Xylene	108-38-3 106-42-3	18.2	91.0	75.0-114.0
o-Xylene	95-47-6	16.6	83.0	64.0-111.0
1,3,5-Trimethylbenzene	108-67-8	16.6	83.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.0	90.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	21.4	107.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.5	87.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		101%	70%-130% (QC limits)	

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

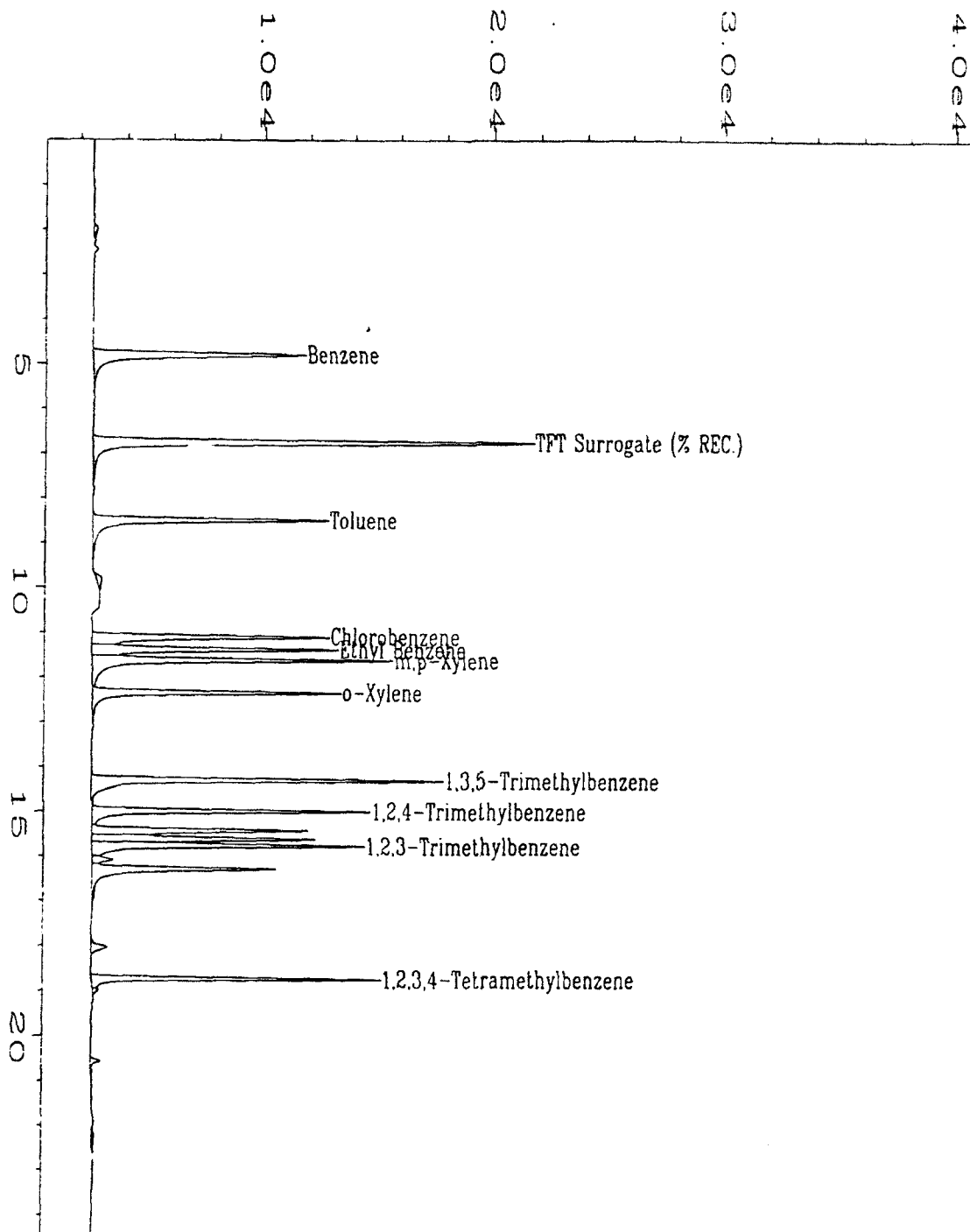
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

P. McClellan
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20326\011R0801.D	Page Number	: 1
Operator	: T.L. Lockwood	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS032695	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20326.MTH
Acquired on	: 26 Mar 95 07:29 PM	Analysis Method	: BX20326A.MTH
Report Created on	: 17 Apr 95 02:06 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS032795	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/27/95	Method	: 602
Date Analyzed	: 3/27/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2032710

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.1	85.5	71.0-119.0
Toluene	108-88-3	16.6	83.0	73.0-111.0
Chlorobenzene	108-90-7	18.1	90.5	64.0-119.0
Ethyl Benzene	100-41-4	17.1	85.5	75.0-114.0
m,p-Xylene	108-38-3	18.3	91.5	75.0-114.0
	106-42-3			
o-Xylene	95-47-6	16.9	84.5	64.0-111.0
1,3,5-Trimethylbenzene	108-67-8	17.8	89.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.2	91.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.2	101.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.4	92.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		99%	70%-130% (QC limits)	

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

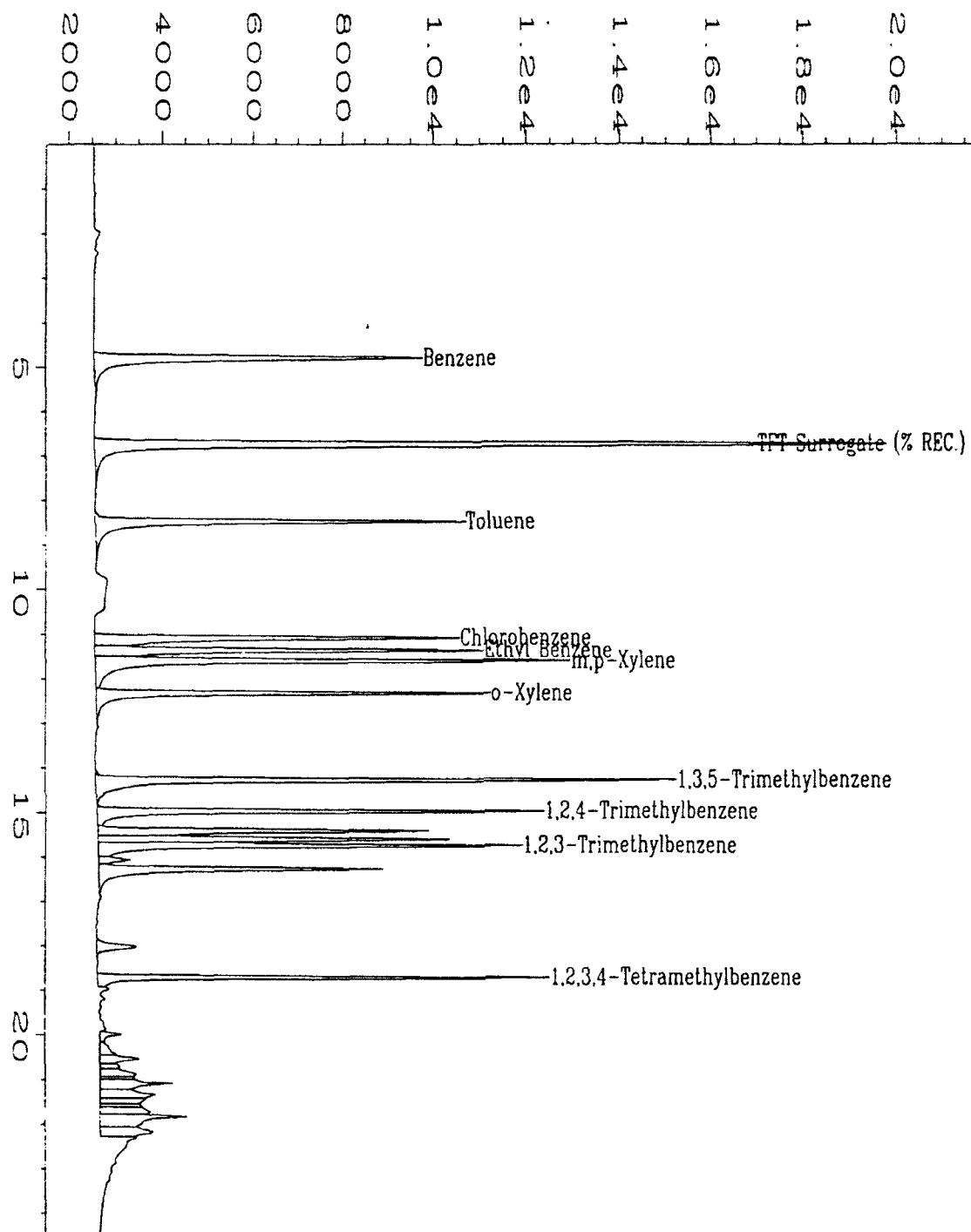
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

A. McCall
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20327\010R0601.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS032795	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	BX20327.MTH
quired on	: 27 Mar 95 05:21 PM	Analysis Method	: BX20327A.MTH
Report Created on:	17 Apr 95 12:35 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS032895	Dilution Factor	: 1.00
Date Extracted/Prepared	: 3/28/95	Method	: 602
Date Analyzed	: 3/28/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2032810

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	15.0	75.0	71.0-119.0
Toluene	108-88-3	16.3	81.5	73.0-111.0
Chlorobenzene	108-90-7	15.5	77.5	64.0-119.0
Ethyl Benzene	100-41-4	16.5	82.5	75.0-114.0
m,p-Xylene	108-38-3	18.0	90.0	75.0-114.0
	106-42-3			
o-Xylene	95-47-6	16.6	83.0	64.0-111.0
1,3,5-Trimethylbenzene	108-67-8	15.9	79.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.7	88.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.6	103.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.2	86.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		107%	70%-130% (QC limits)	

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

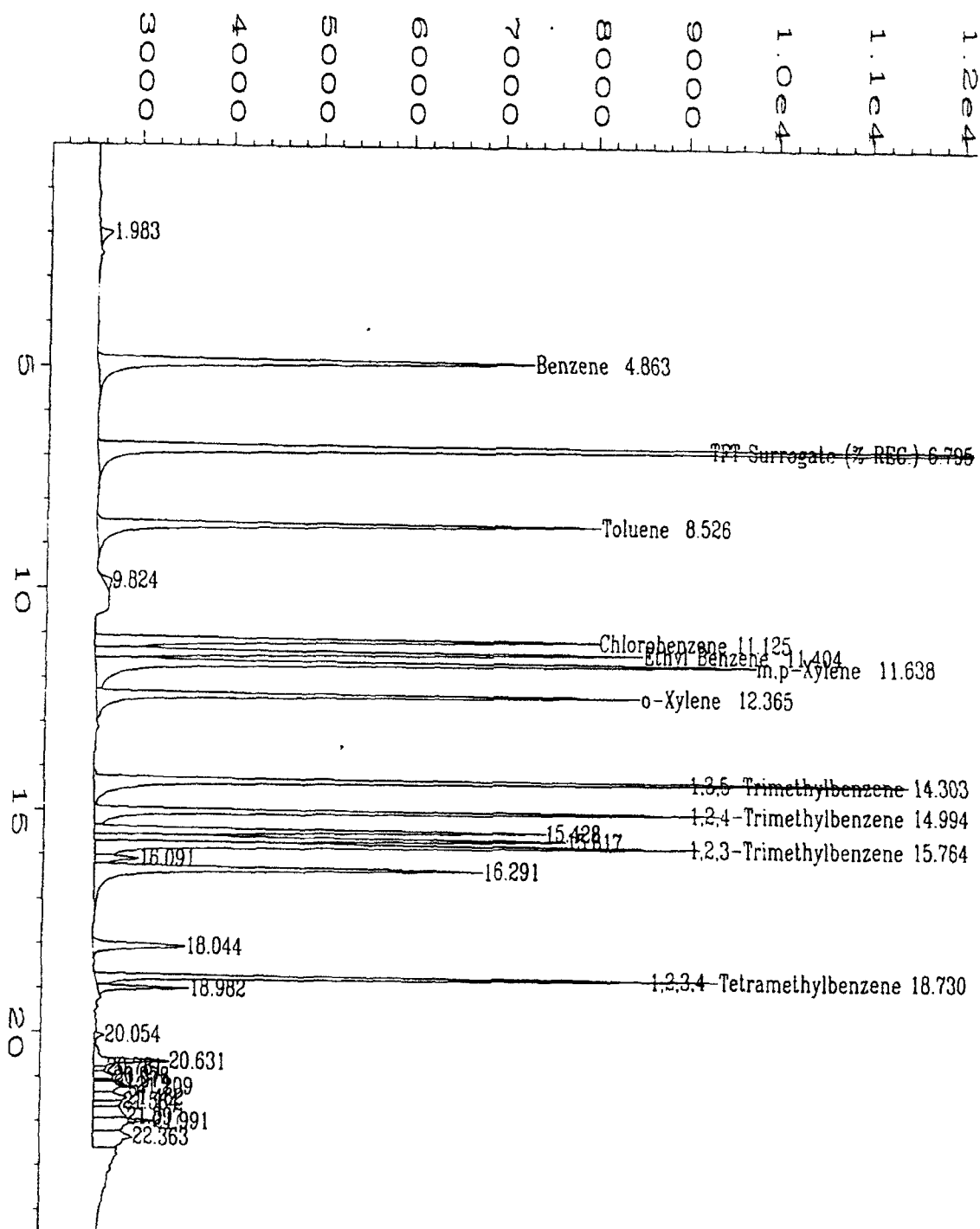
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

A. McCell
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20328\010R0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS032895	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX20328.MTH
uired on	: 28 Mar 95 05:09 PM	Analysis Method	: BX20328B.MTH
Report Created on:	: 18 Apr 95 01:07 AM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS032995 Dilution Factor : 1.00
Date Extracted/Prepared : 3/29/95 Method : 602
Date Analyzed : 3/29/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2032910

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.3	91.5	71.0-119.0
Toluene	108-88-3	18.1	90.5	73.0-111.0
Chlorobenzene	108-90-7	19.8	99.0	64.0-119.0
Ethyl Benzene	100-41-4	17.7	88.5	75.0-114.0
m,p-Xylene	108-38-3	18.8	94.0	75.0-114.0
	106-42-3			
o-Xylene	95-47-6	18.7	93.5	64.0-111
1,3,5-Trimethylbenzene	108-67-8	17.8	89.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.3	101.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	25.1	125.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	20.1	100.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)	

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

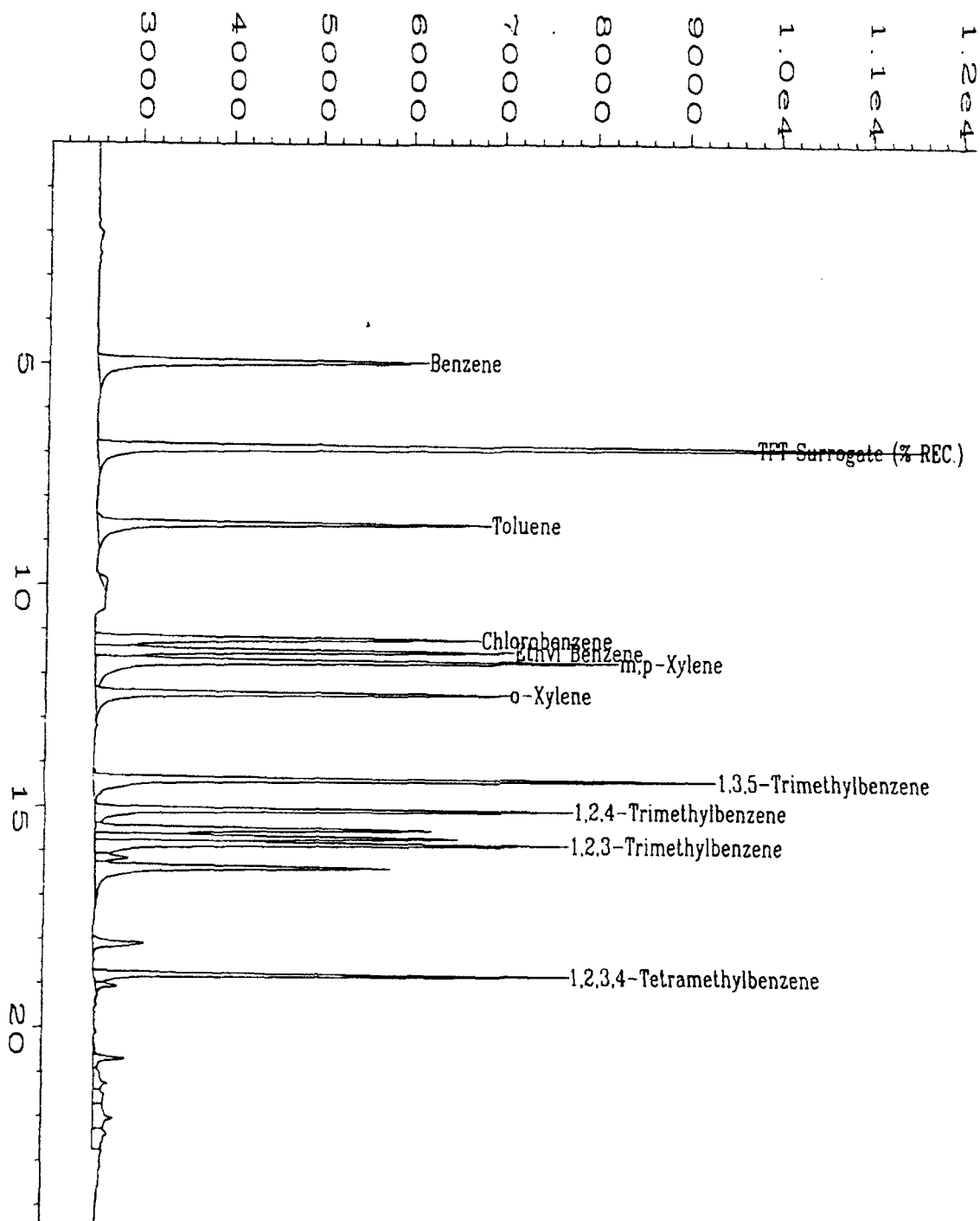
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

A. McClellan
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20329\010R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS032995	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20329.MTH
Acquired on	: 29 Mar 95 05:55 PM	Analysis Method	: BX20329B.MTH
Report Created on:	17 Apr 95 09:41 PM	Sample Amount	: 0
Last Recalib on	: 14 APR 95 00:39 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS033095 Dilution Factor : 1.00
Date Extracted/Prepared : 3/30/95 Method : 602
Date Analyzed : 3/30/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2033010

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.9	84.5	71.0-119.0
Toluene	108-88-3	17.2	86.0	73.0-111.0
Chlorobenzene	108-90-7	17.3	86.5	64.0-119.0
Ethyl Benzene	100-41-4	17.8	89.0	75.0-114.0
m,p-Xylene	108-38-3	19.1	95.5	75.0-114.0
	106-42-3			
o-Xylene	95-47-6	17.2	86.0	64.0-111
1,3,5-Trimethylbenzene	108-67-8	18.1	90.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.4	92.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	22.4	112.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.4	87.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		95%	70%-130% (QC limits)	

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

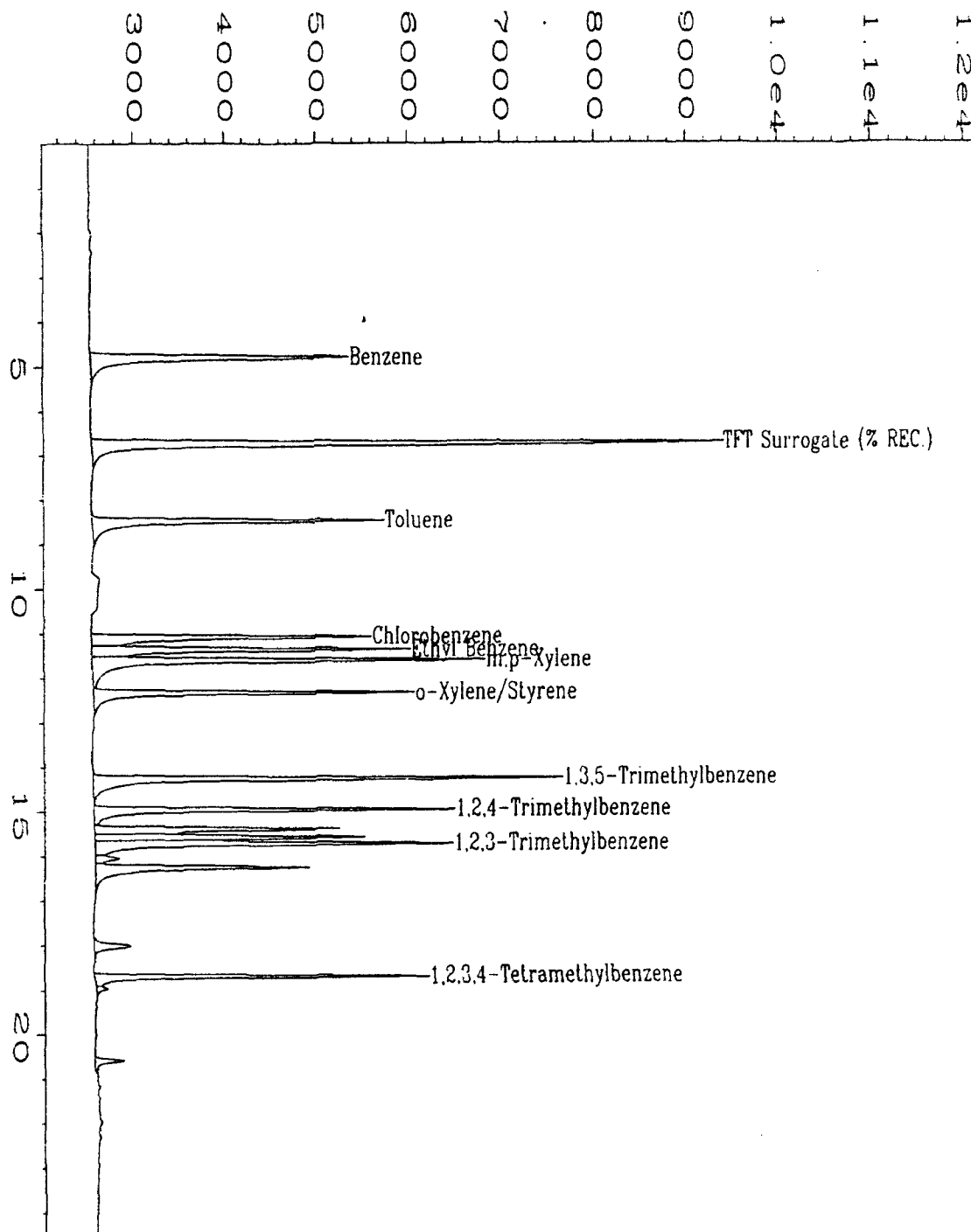
NA = Not available/Not analyzed.

Analyst

K. Cone

Approved

P. McCalla



Data File Name	: C:\HPCHEM\2\DATA\BX20330\010R0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS033095	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20330.MTH
quired on	: 30 Mar 95 06:02 PM	Analysis Method	: BX20330.MTH
Report Created on:	: 31 Mar 95 08:44 AM	Sample Amount	: 0
Last Recalib on	: 31 MAR 95 08:24 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS032995 Matrix : WATER
Date Prepared : 3/29/95 Method Number : 8030/MOD.8015
Date Analyzed : 3/29/95
Sequence Number : TVH19

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	2.00	1.91	96%	70%-130%

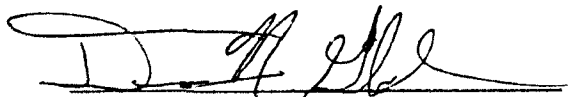
QUALIFIERS

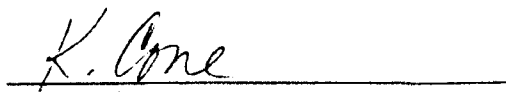
U = TVH analyzed for but not detected.

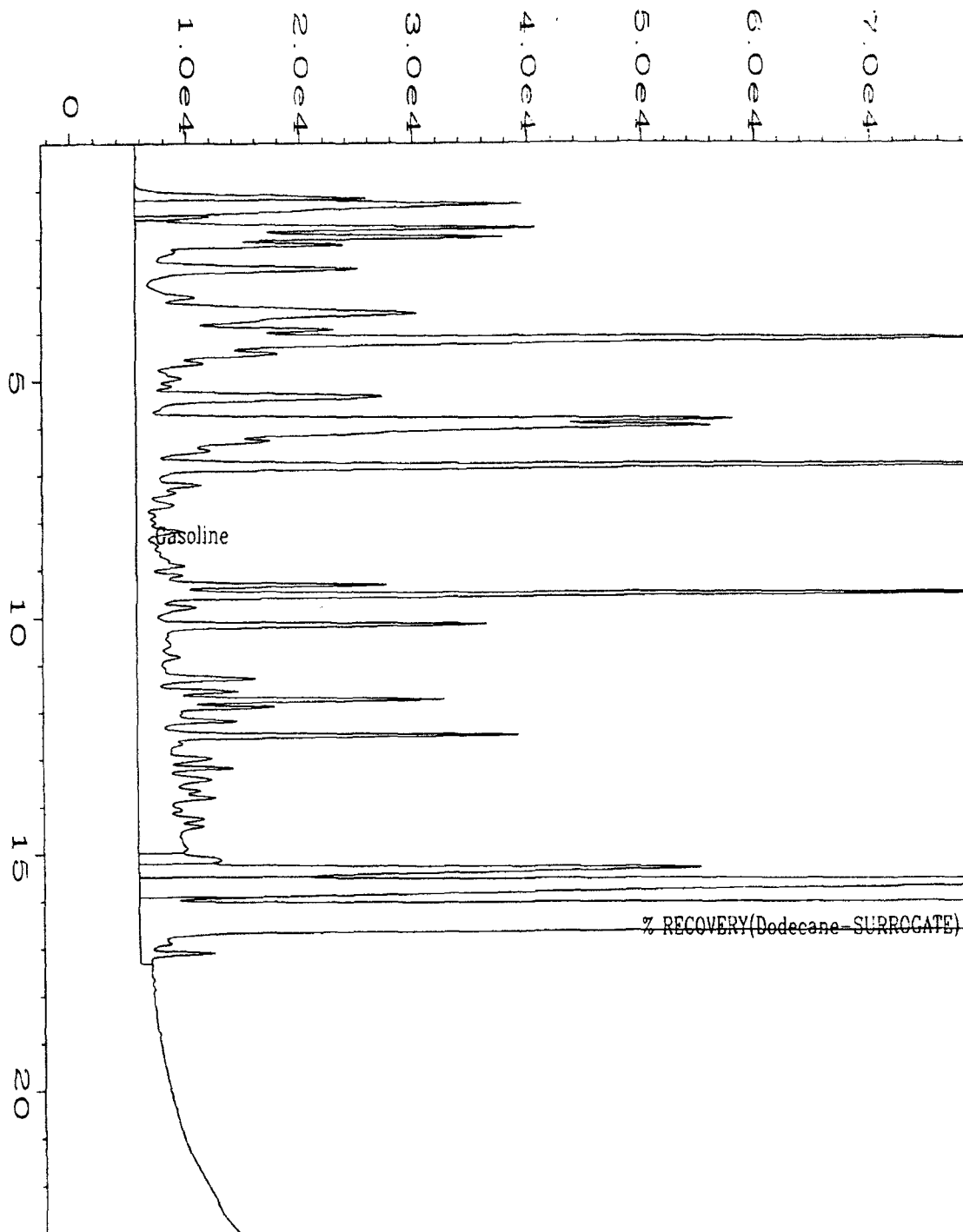
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\tvh0329\019F0201.D	Page Number	: 1
Operator	: kaprie s. con	Vial Number	: 19
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS032995	Sequence Line	: 2
Time Bar Code:		Instrument Method	: TVH0329.MTH
Acquired on	: 29 Mar 95 09:26 PM	Analysis Method	: TVH0329.MTH
Report Created on	: 29 Mar 95 09:50 PM	Sample Amount	: 0
Last Recalib on	: 29 Mar 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled : 3/20,21/95 Client Project Number : 722450.21020/MACDILL
Date Received : 3/22/95 Lab Project Number : 95-0915
Date Prepared : 3/29/95 Matrix : Water
Date Analyzed : 3/29,30/95 Method Number : 5030/Mod.8015

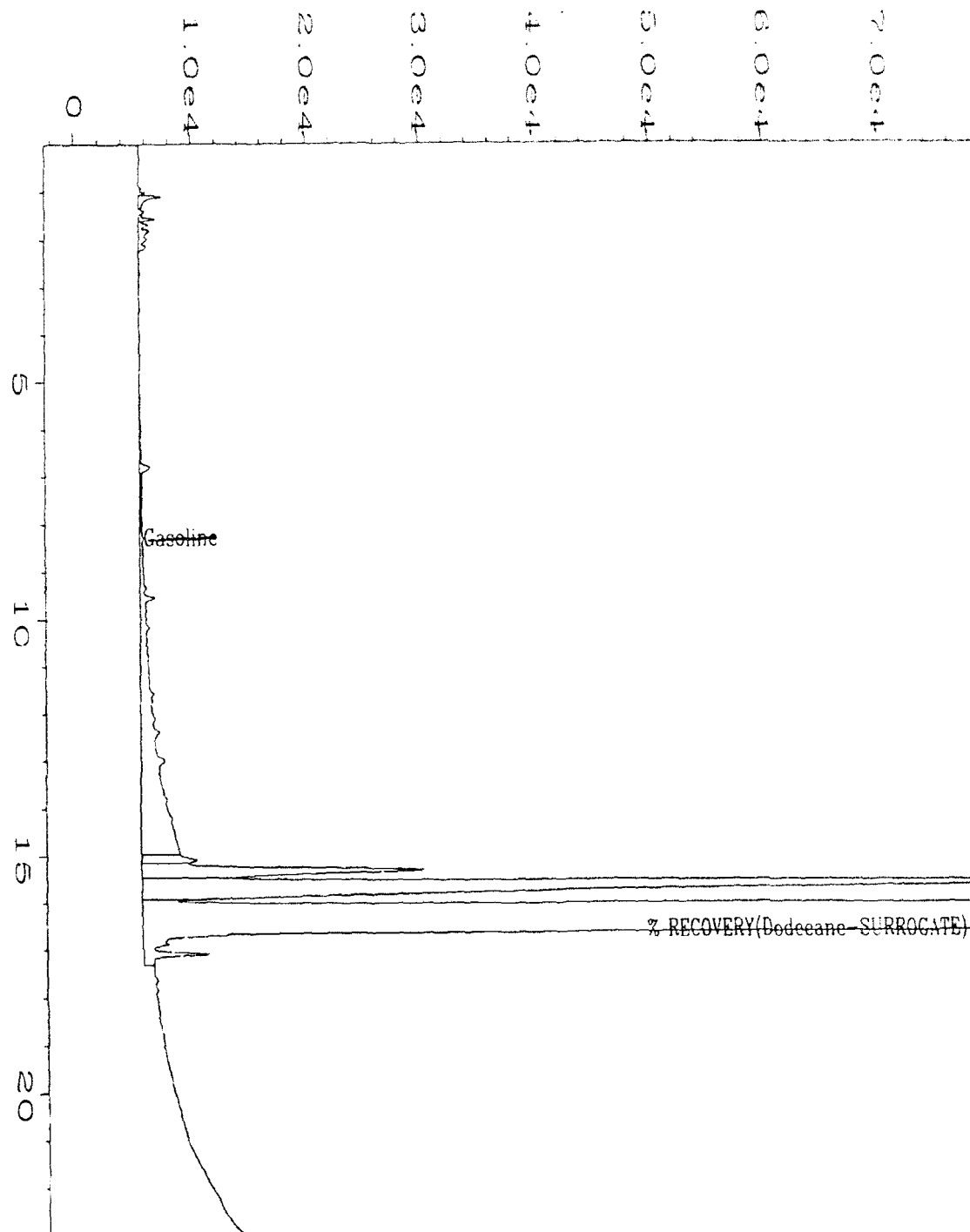
<u>Evergreen Sample #</u>	<u>Client Sample #</u>	<u>Surrogate Recovery</u>	<u>TVH mg/L</u>	<u>RL mg/L</u>
MB032995	METHOD BLANK	100%	U	0.1
MB033095	METHOD BLANK	100%	U	0.1
X04546	24MP-5S	97%	U	0.1
X04547	24MP-3S	97%	U	0.1
X04548	24MP-3D	82%	U	0.1
X04549	24MP-8D	87%	U	0.1
X04550	24MP-8S	98%	U	0.1
X04551	MD24-9	87%	U	0.1
X04552	MD24-10A	100%	U	0.1
X04553	MD24-10	88%	U	0.1
X04554	MD24-7	89%	U	0.1
X04555	MD24-7 (DUP)	87%	U	0.1

QUALIFIERS

U = TVH analyzed for but not detected.
B = TVH found in blank as well as sample.
E = Extrapolated value.
RL = Reporting Limit.

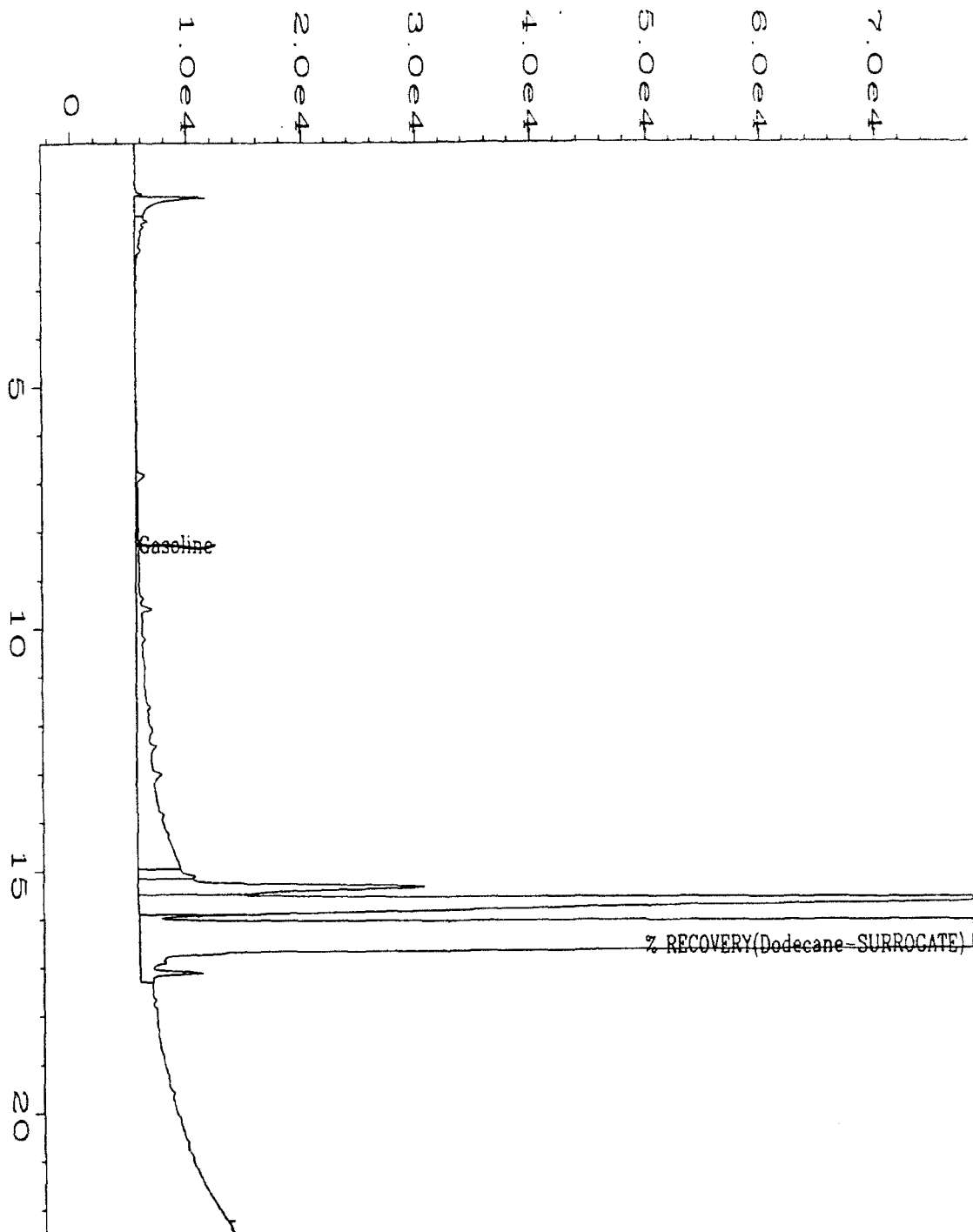
K. Cone
Analyst

A. McCalla
Approved



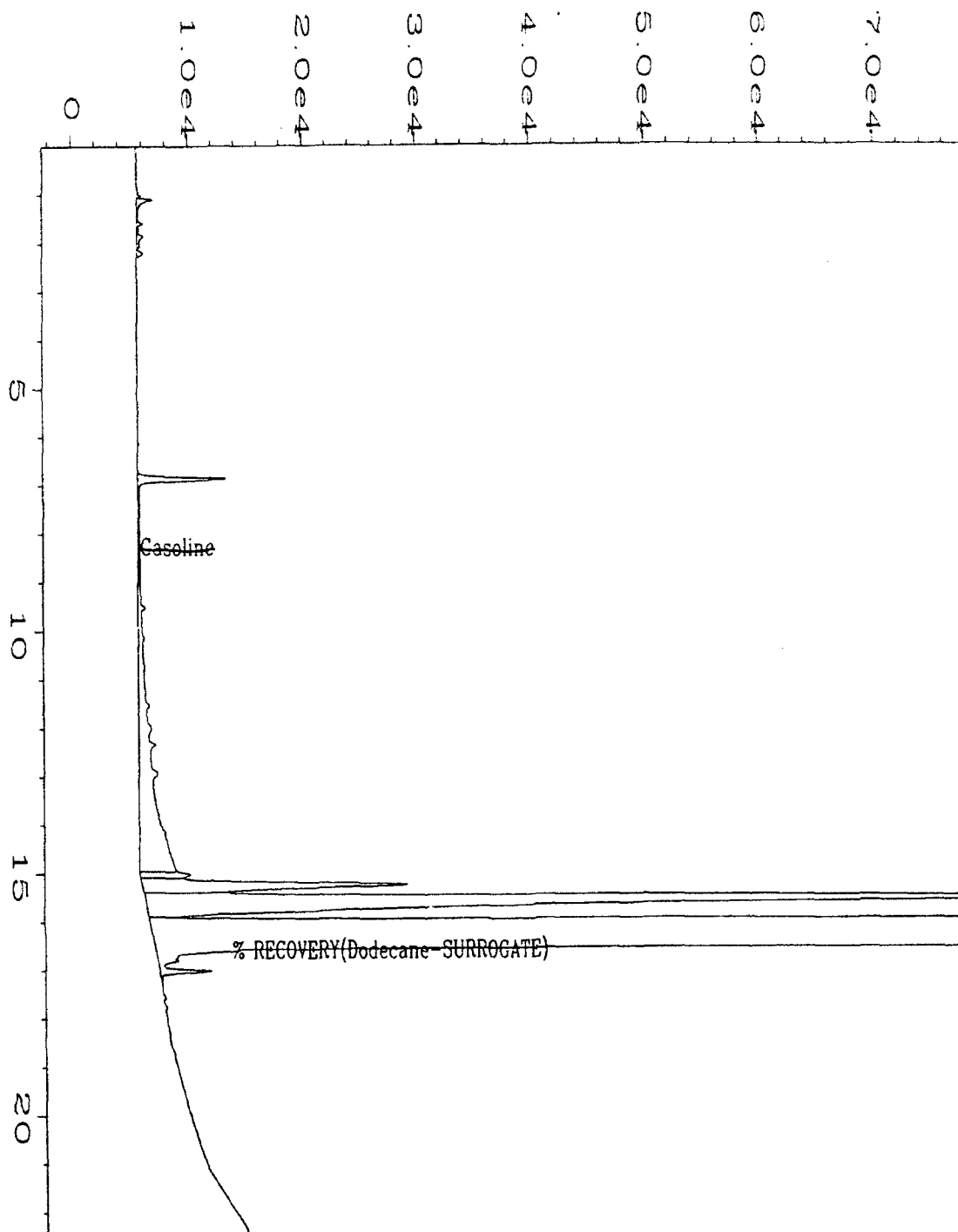
Data File Name	: C:\HPCHEM\1\DATA\tvh0329\018F0201.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 18
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB032995	Sequence Line	: 2
Time Bar Code:		Instrument Method	: TVH0329.MTH
Acquired on	: 29 Mar 95 08:52 PM	Analysis Method	: TVH0329.MTH
Report Created on	: 29 Mar 95 09:15 PM	Sample Amount	: 0
Last Recalib on	: 29 Mar 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/17/95



Data File Name	: C:\HPCHEM\1\DATA\tvh0329\044F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 44
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB033095	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH032. TH
Acquired on	: 30 Mar 95 11:35 AM	Analysis Method	: TVH0329.MTH
Report Created on:	30 Mar 95 11:58 AM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		

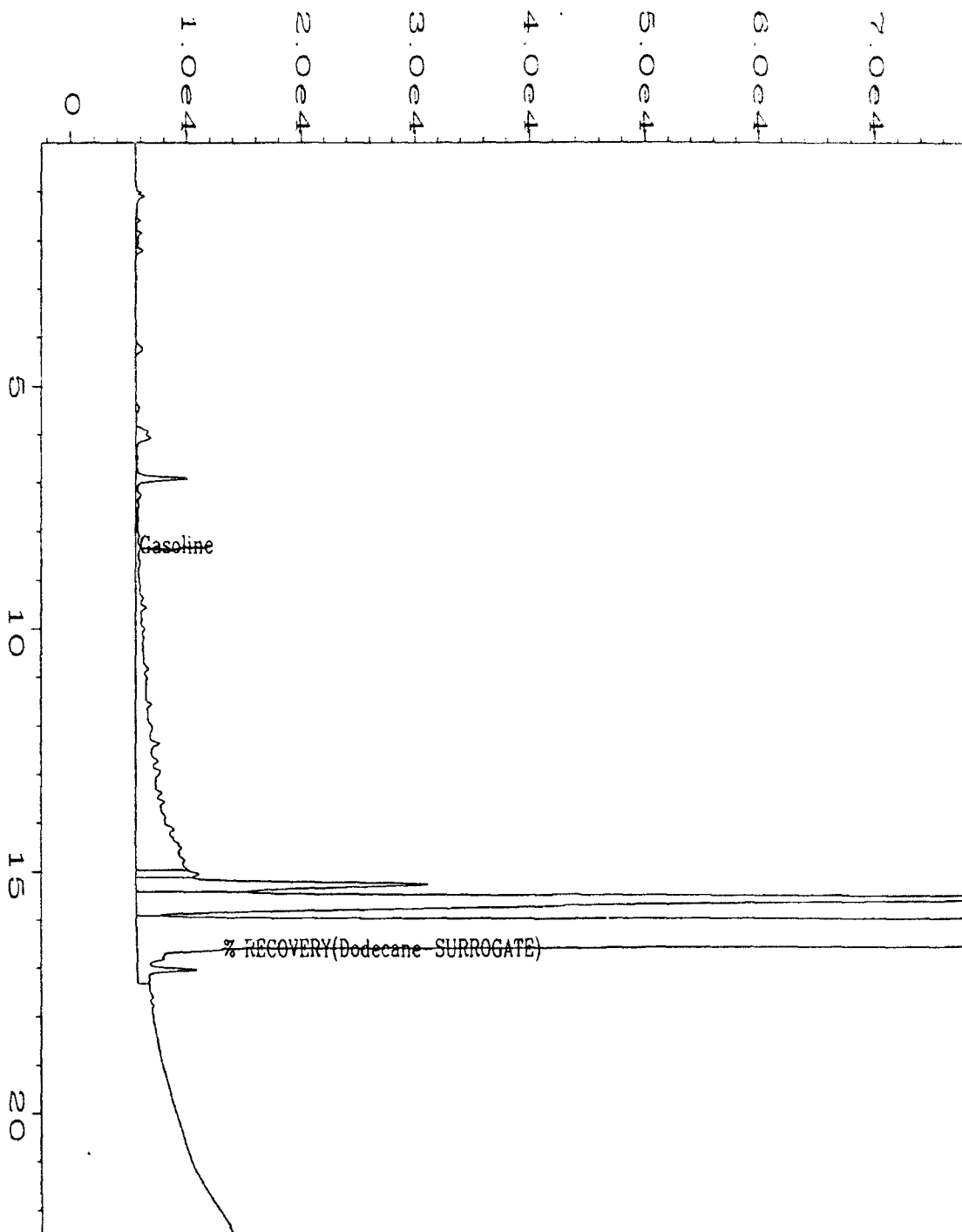
pm 4/17/95



Data File Name : C:\HPCHEM\1\DATA\tvh0329\033F0101.D
 Operator : kaprie s. cone
 Instrument : TVH
 Sample Name : X04546; 1; 5
 Time Bar Code:
 Acquired on : 30 Mar 95 05:23 AM
 Report Created on: 30 Mar 95 05:46 AM
 Last Recalib on : 29 MAR 95 08:06 PM
 Multiplier : 1
 Sample Info : 95-0915; PARSONS ES; CLIENT # 24MP-5S; 5 ML
 WATER

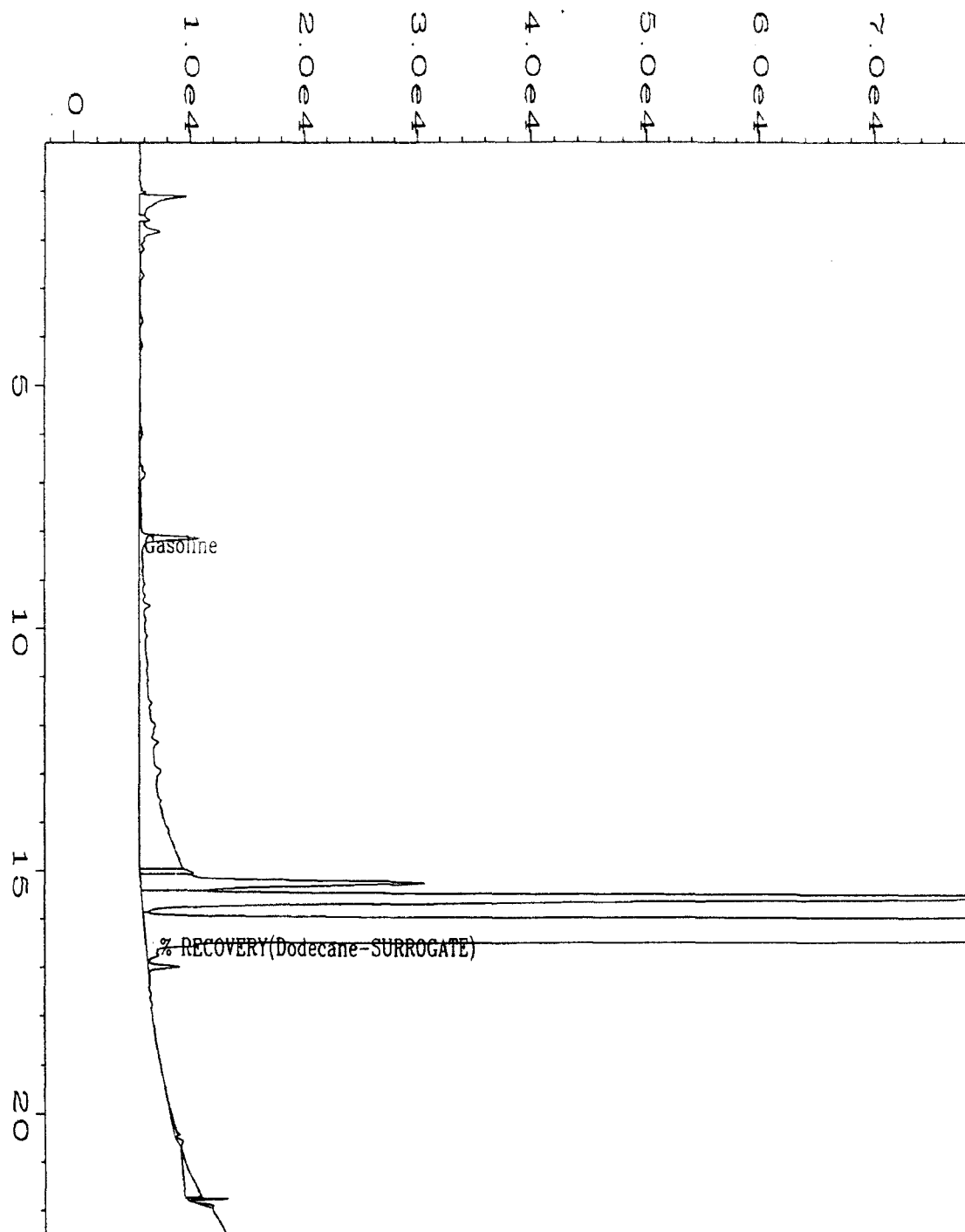
Page Number : 1
 Vial Number : 33
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: TVH0329.MTH
 Analysis Method : TVH0329.MTH
 Sample Amount : 0
 ISTD Amount :

pm 4/17/95

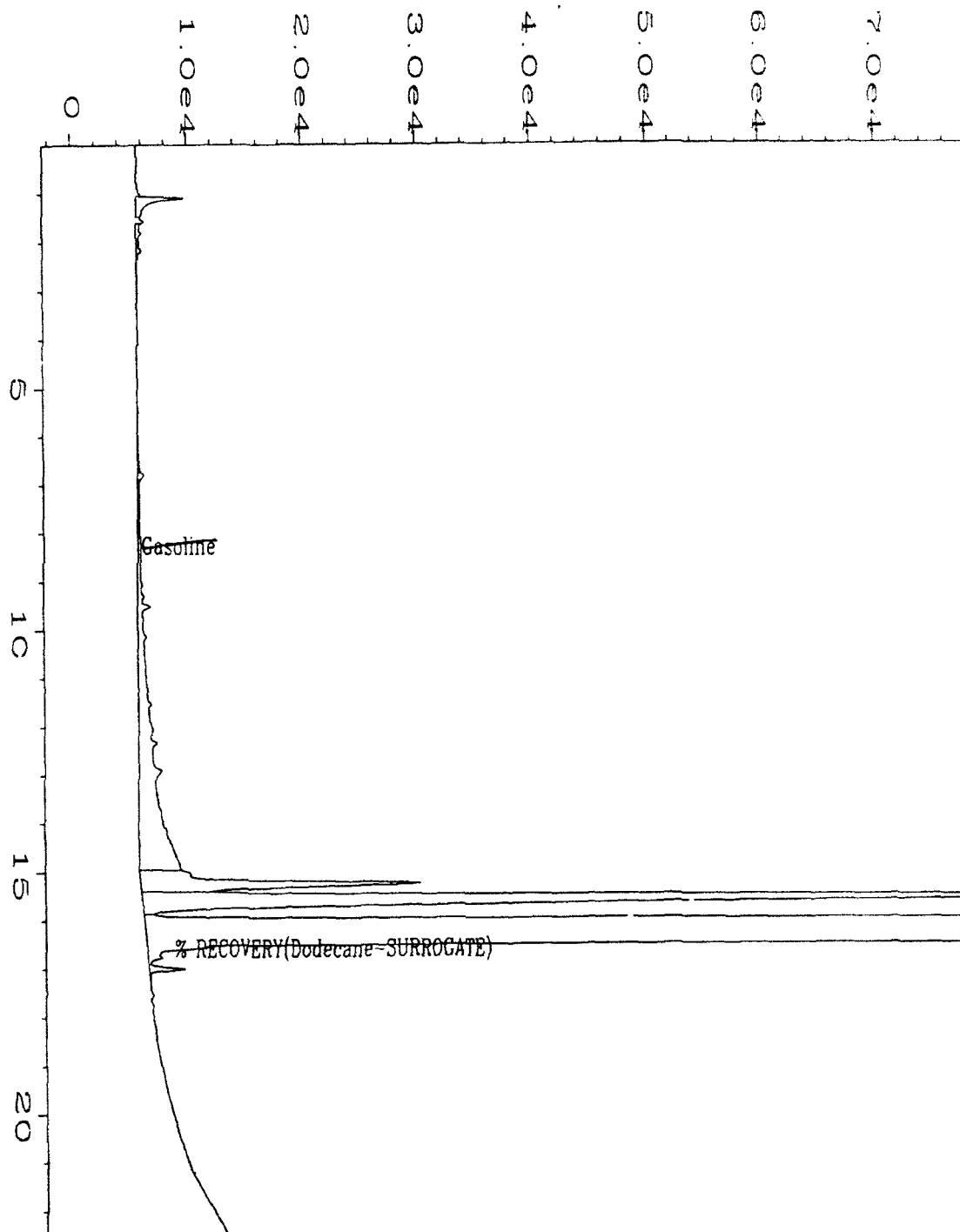


Data File Name	: C:\HPCHEM\1\DATA\tvh0329\034F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 34
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04547; 1; 5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH0329.MIF
Acquired on	: 30 Mar 95 05:57 AM	Analysis Method	: TVH0329.MIF
Report Created on:	30 Mar 95 06:20 AM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-0915; PARSONS ES; CLIENT # 24MP-3S; 5 ML WATER		

pm 4/17/95

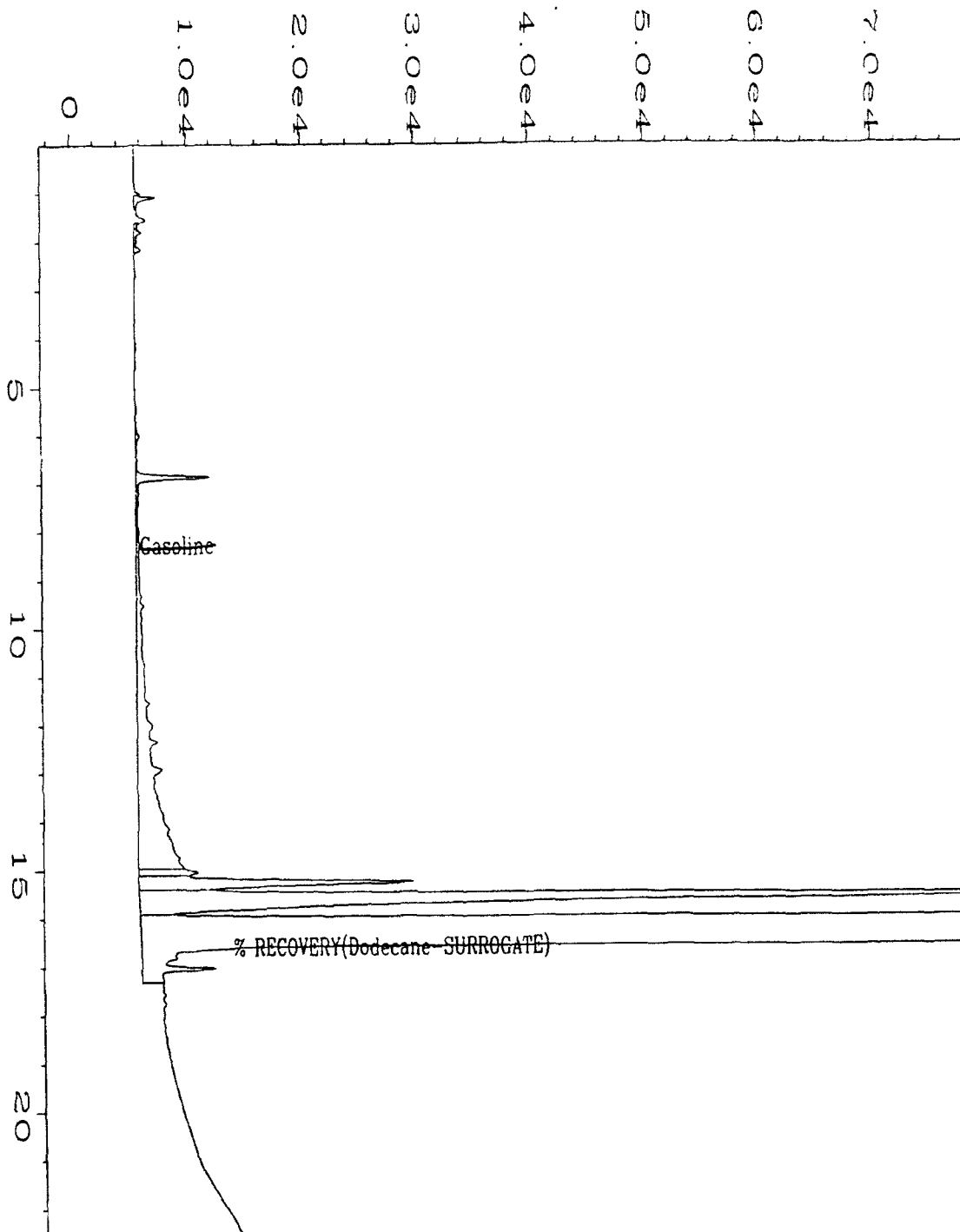


Data File Name	: C:\HPCHEM\1\DATA\tvh0329\046F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 46
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04548; 1; 5	Sequence Line	: 1
Print Time Bar Code:		Instrument Method	: TVH0329.MTH
Acquired on	: 30 Mar 95 12:56 PM	Analysis Method	: TVH0329.MTH
Report Created on:	30 Mar 95 01:22 PM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-0915; FARSONS ES; CLIENT # 24MP-3D; 5 ML WATER		



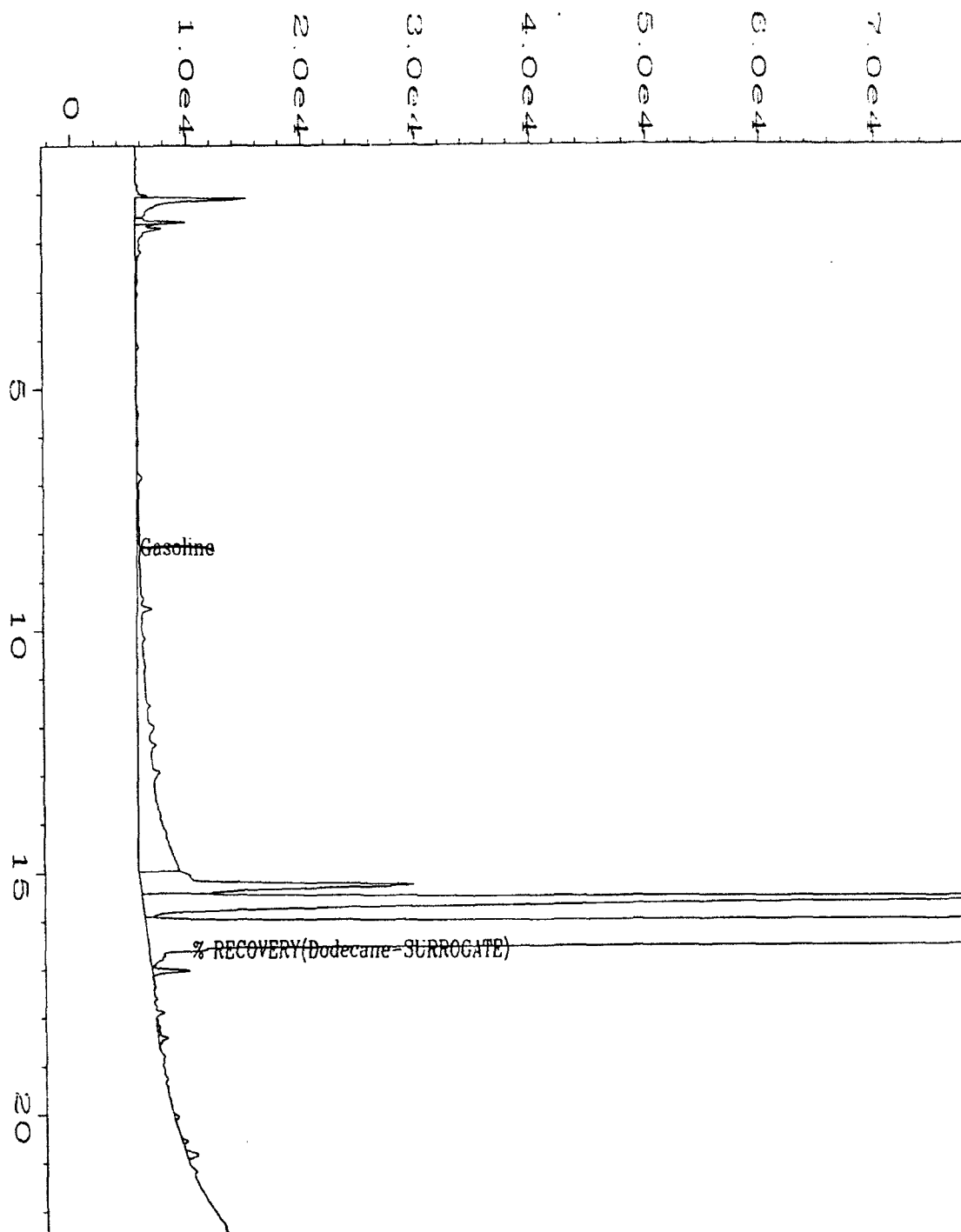
Data File Name	: C:\HPCHEM\1\DATA\tvh0329\047F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 47
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04549; 1; 5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH0329.M
Acquired on	: 30 Mar 95 01:30 PM	Analysis Method	: TVH0329.M
Report Created on:	30 Mar 95 01:53 PM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-0915; PARSONS ES; CLIENT # 24MP-8D; 5 ML		
	WATER		

dm 4/17/95



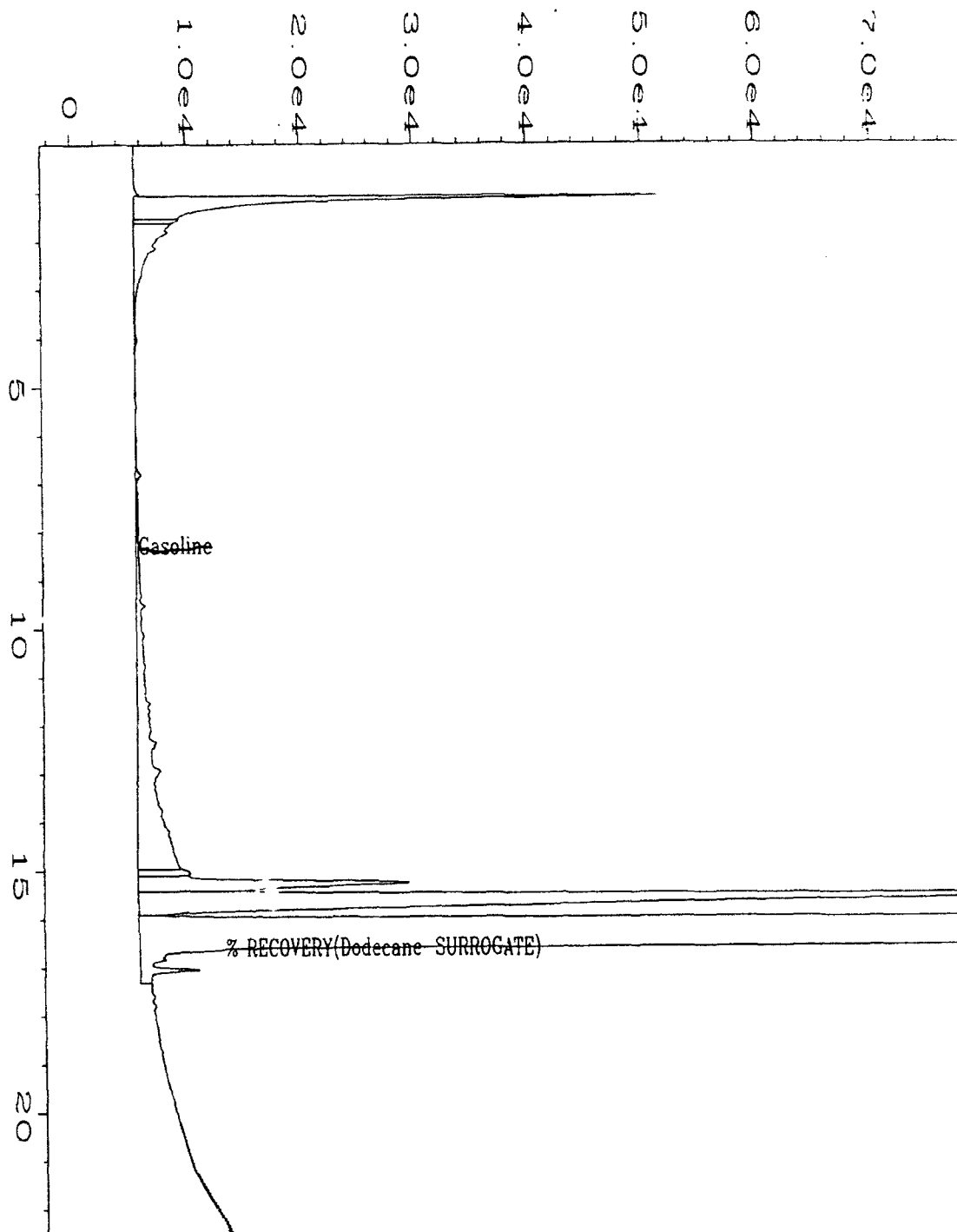
Data File Name	: C:\HPCHEM\1\DATA\tvh0329\037F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 37
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04550; 1; 5	Sequence Line	: 1
Time Bar Code:		Instrument Method:	TVH0329.MTH
Acquired on	: 30 Mar 95 07:32 AM	Analysis Method	: TVH0329.MTH
Report Created on:	30 Mar 95 07:55 AM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-0915; PARSONS ES; CLIENT # 24MP-8S; 5 ML		
	WATER		

pm 4/17/95



Data File Name	: C:\HPCHEM\1\DATA\tvh0329\048F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 48
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04551; 1; 5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH0329.H
Acquired on	: 30 Mar 95 02:04 PM	Analysis Method	: TVH0329.MTH
Report Created on:	30 Mar 95 02:27 PM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-0915; PARSONS ES; CLIENT # 24MP 9; 5 ML		
	WATER		

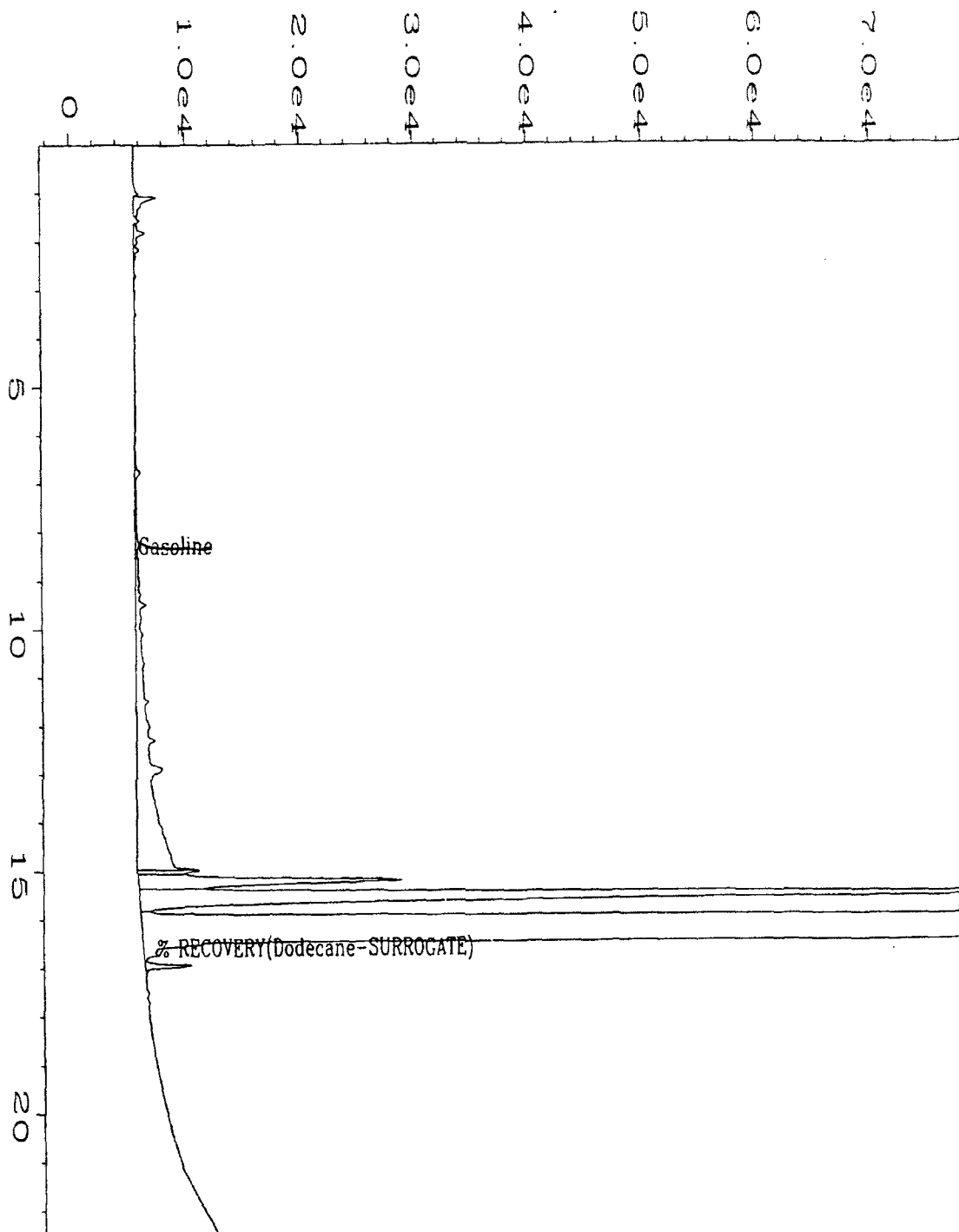
MD24
on 4/17/95



Data File Name	: C:\HPCHEM\1\DATA\tvh0329\040F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 40
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04552; 1; 5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH0329.MTH
quired on	: 30 Mar 95 09:13 AM	Analysis Method	: TVH0329.MTH
Report Created on:	30 Mar 95 09:39 AM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-0915; PARSONS ES; CLIENT # 24MP-10A; 5 ML		
	WATER		

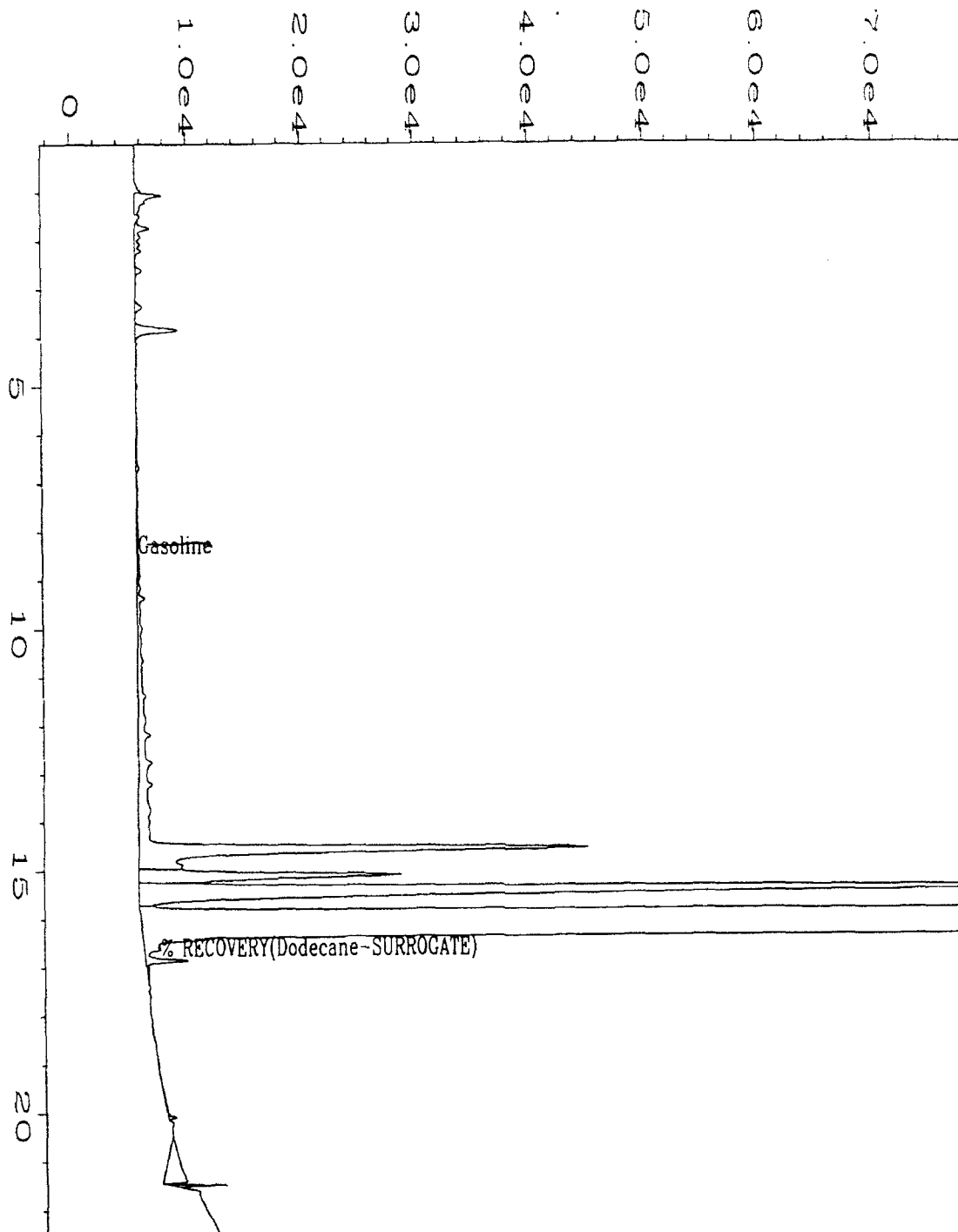
1024

pm 4/17/95



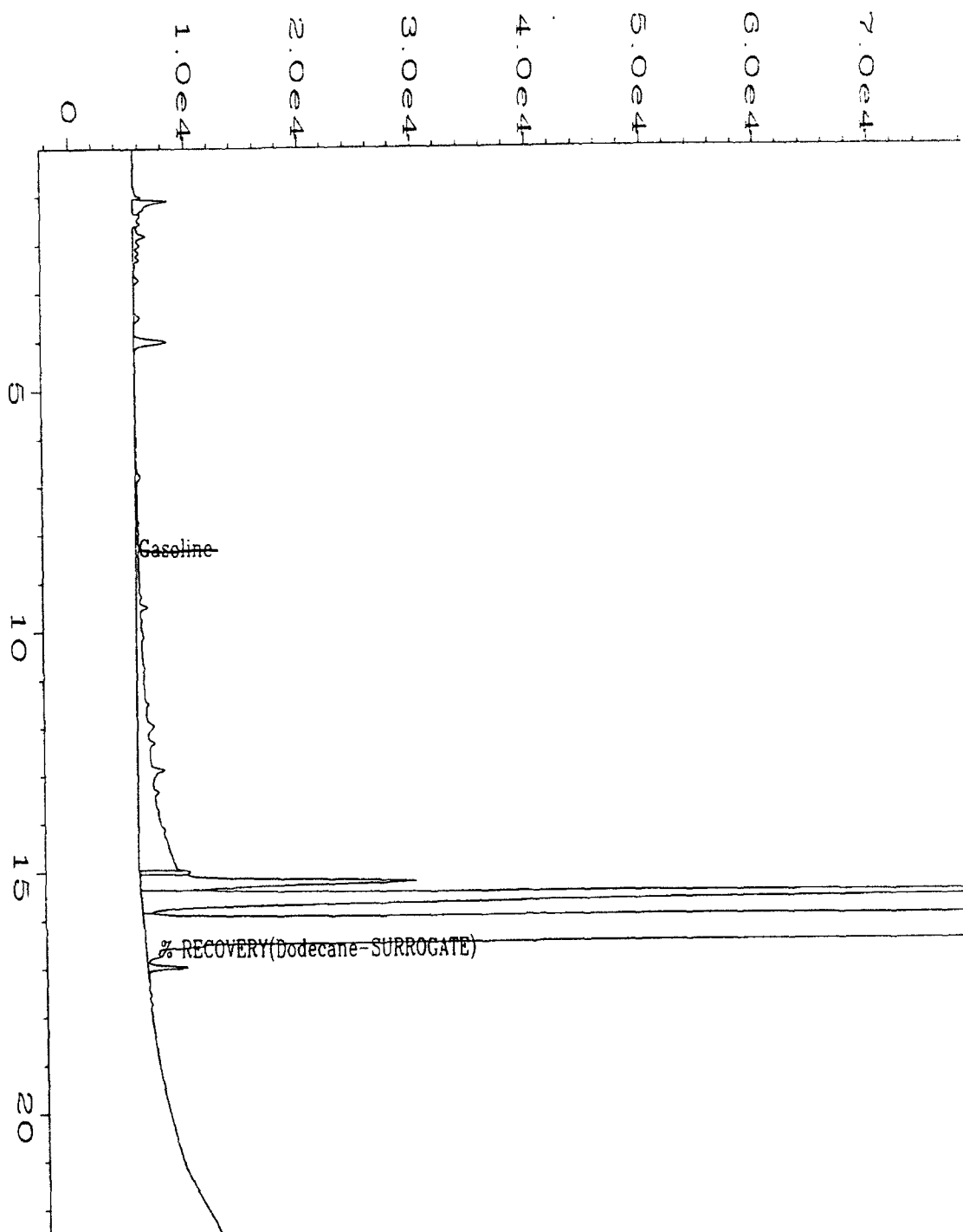
Data File Name	: C:\HPCHEM\1\DATA\tvh0329\053F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 53
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04553 DF=1,5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH0329...H
Acquired on	: 30 Mar 95 04:54 PM	Analysis Method	: TVH0329...H
Report Created on:	30 Mar 95 05:17 PM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0915 CLIENT # MD24-10 WATER		

pm 4/17/95



Data File Name	: C:\HPCHEM\1\DATA\tvh0329\051F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 51
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04554 DF=1,5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH0329.MTH
quired on	: 30 Mar 95 03:46 PM	Analysis Method	: TVH0329.MTH
Report Created on:	30 Mar 95 04:09 PM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0915 CLIENT # MD24-7 WATER		

pm 4/17/95



Data File Name	: C:\HPCHEM\1\DATA\tvh0329\052F0101.D	Page Number	: 1
Operator	: kaprie s. cone	Vial Number	: 52
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04555 DUP	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH0329 H
Acquired on	: 30 Mar 95 04:20 PM	Analysis Method	: TVH0329.mTH
Report Created on:	30 Mar 95 04:43 PM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-0915 CLIENT # MD24-7 WATER		

Don 4/17/95

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MATRIX SPIKE	Client Project No.	: 722450.21020/MAC
Lab Sample No.	: X04571	Lab Project No.	: 95-0915
Date Sampled	: 3/20/95	EPA Method No.	: 5030/8015 Mod.
Date Received	: 3/22/95	Matrix	: SOIL
Date Prepared	: 4/2/95	Method Blank	: MB040295
Date Analyzed	: 4/2/95		

Compound	Spike Added (mg/kg)	Sample Concentration (mg/kg)	MS Concentration (mg/kg)	MS %REC	QC Limits %REC
Gasoline	2.00	0.00	2.05	103%	60-140

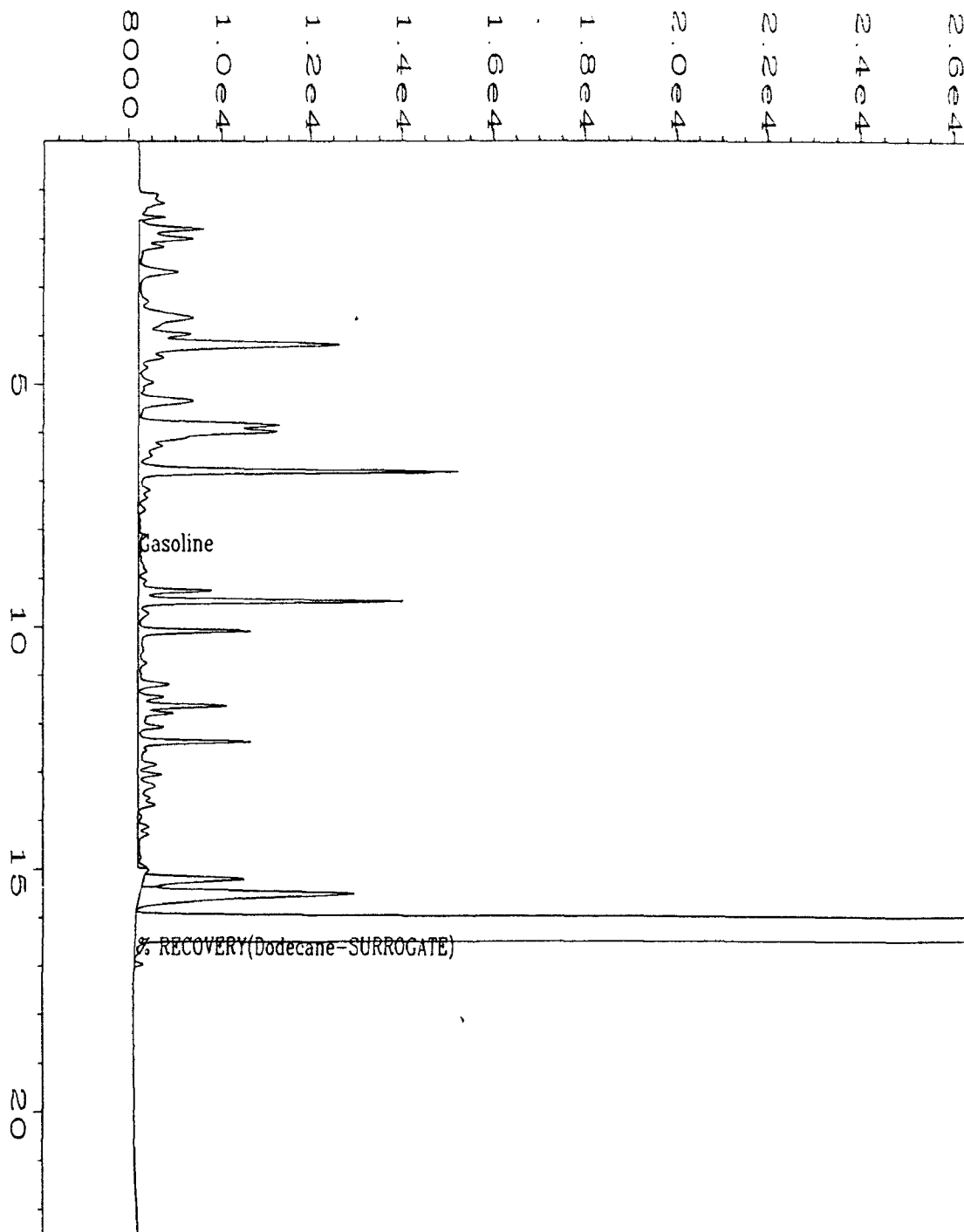
Compound	Spike Added (mg/kg)	MSD Concentration (mg/kg)	MS %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	2.00	1.83	92%	11	50	60-140

* = Values outside of QC limits.

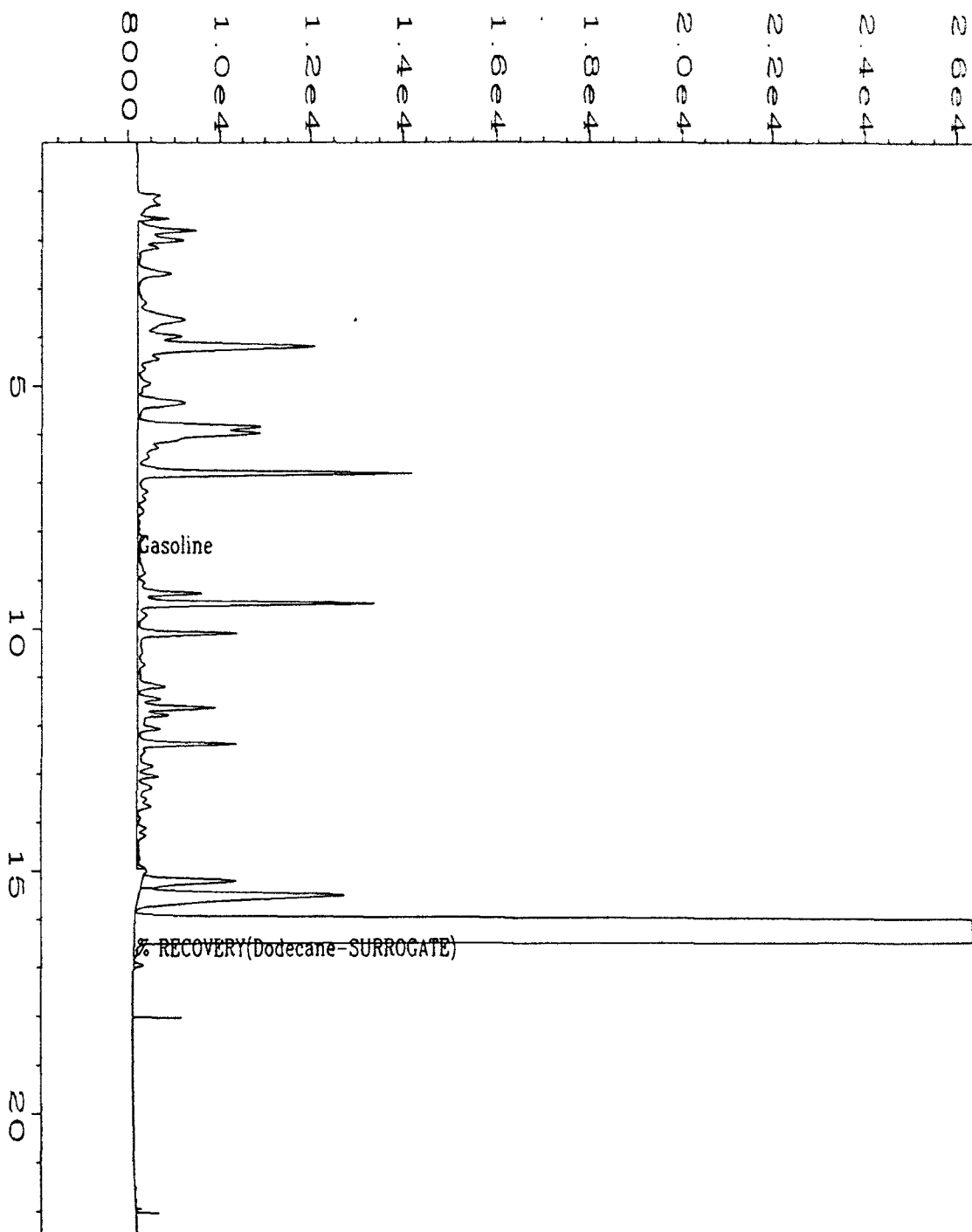
RPD: 0 out of (1) outside limits.

Spike Recovery: 0 out of (2) outside limits.

Comments: NA = Not analyzed/not applicable.



Data File Name	: C:\HPCHEM\1\DATA\tvh0402\021F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 21
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04571MS;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TVH0402.TS
Acquired on	: 02 Apr 95 09:41 PM	Analysis Method	: TVH0402.TS
Report Created on:	02 Apr 95 10:05 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Matrix Spike -2 ppm Gasoline		



Data File Name	: C:\HPCHEM\1\DATA\tvh0402\022F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 22
Instrument	: TVH	Injection Number	: 1
Sample Name	: X04571MSD;1;5	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TVH0402.MTH
quired on	: 02 Apr 95 10:15 PM	Analysis Method	: TVH0402.MTH
Report Created on:	: 02 Apr 95 10:38 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:36 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Soil Spike Duplicate - 2 ppm Gasoline		

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TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS033095 Matrix : SOIL
Date Prepared : 3/30/95 Method Number : 5030/MOD.8015
Date Analyzed : 3/30/95
Sequence Number : TVH6

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	1.00	0.87	87%	70%-130%

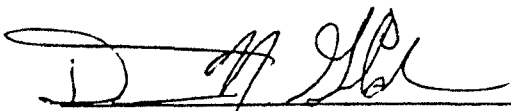
QUALIFIERS

U = TVH analyzed for but not detected.


B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

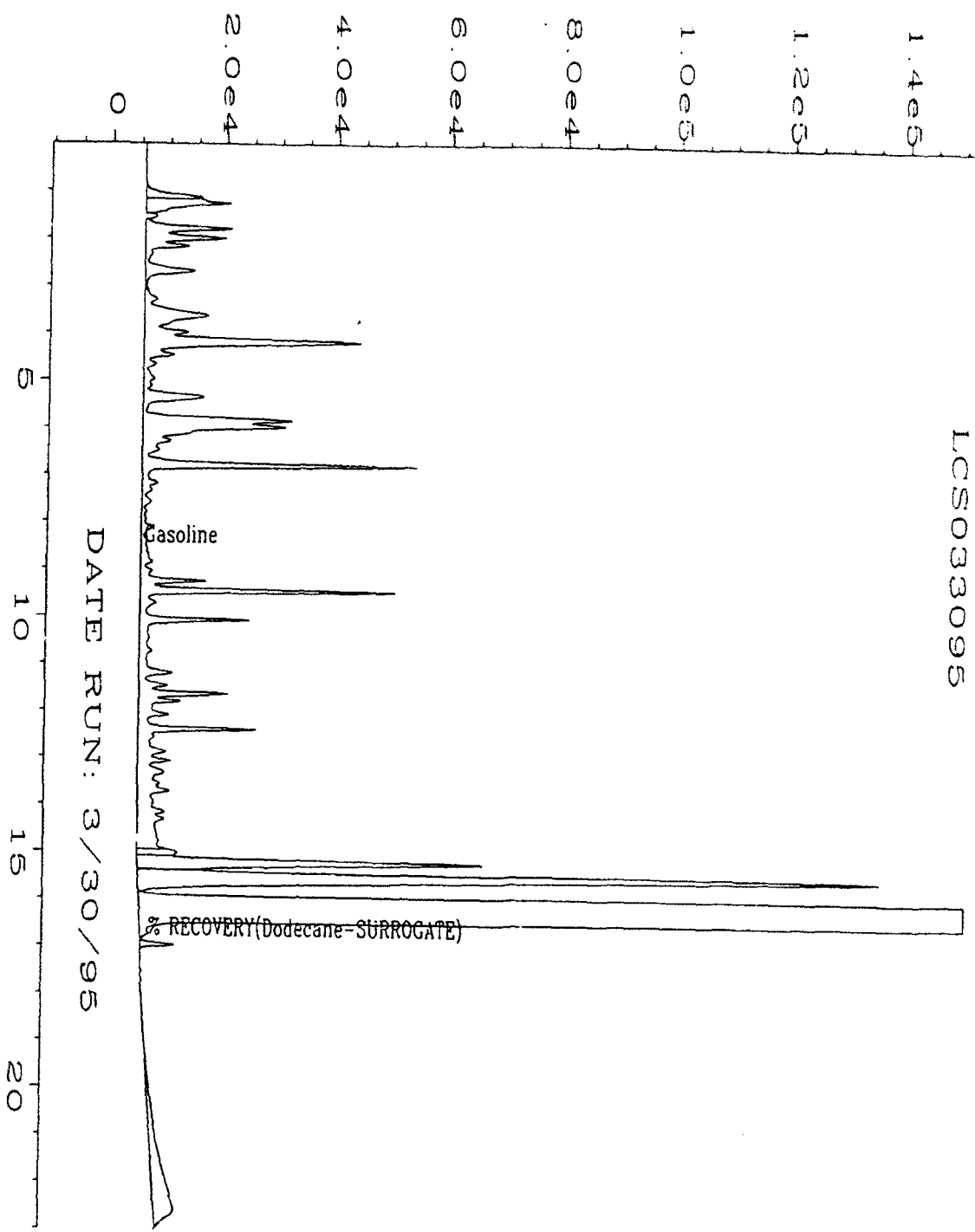
NA = Not Available.



Analyst



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Data File Name	: C:\HPCHEM\1\DATA\TVH0330\006F0201.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 6
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS033095	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: TVH0323.MTH
Required on	: 30 Mar 95 08:43 PM	Analysis Method	: TVH0330.MTH
Report Created on:	: 31 Mar 95 09:47 AM	Sample Amount	: 0
Last Recalib on	: 29 MAR 95 08:06 PM	ISTD Amount	:
Multiplier	: 1		

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TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS033195 Matrix : SOIL
Date Prepared : 3/31/95 Method Number : 5030/MOD.8015
Date Analyzed : 3/31/95
Sequence Number : TVH3

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	1.00	0.75	75%	70%-130%


QUALIFIERS


U = TVH analyzed for but not detected.

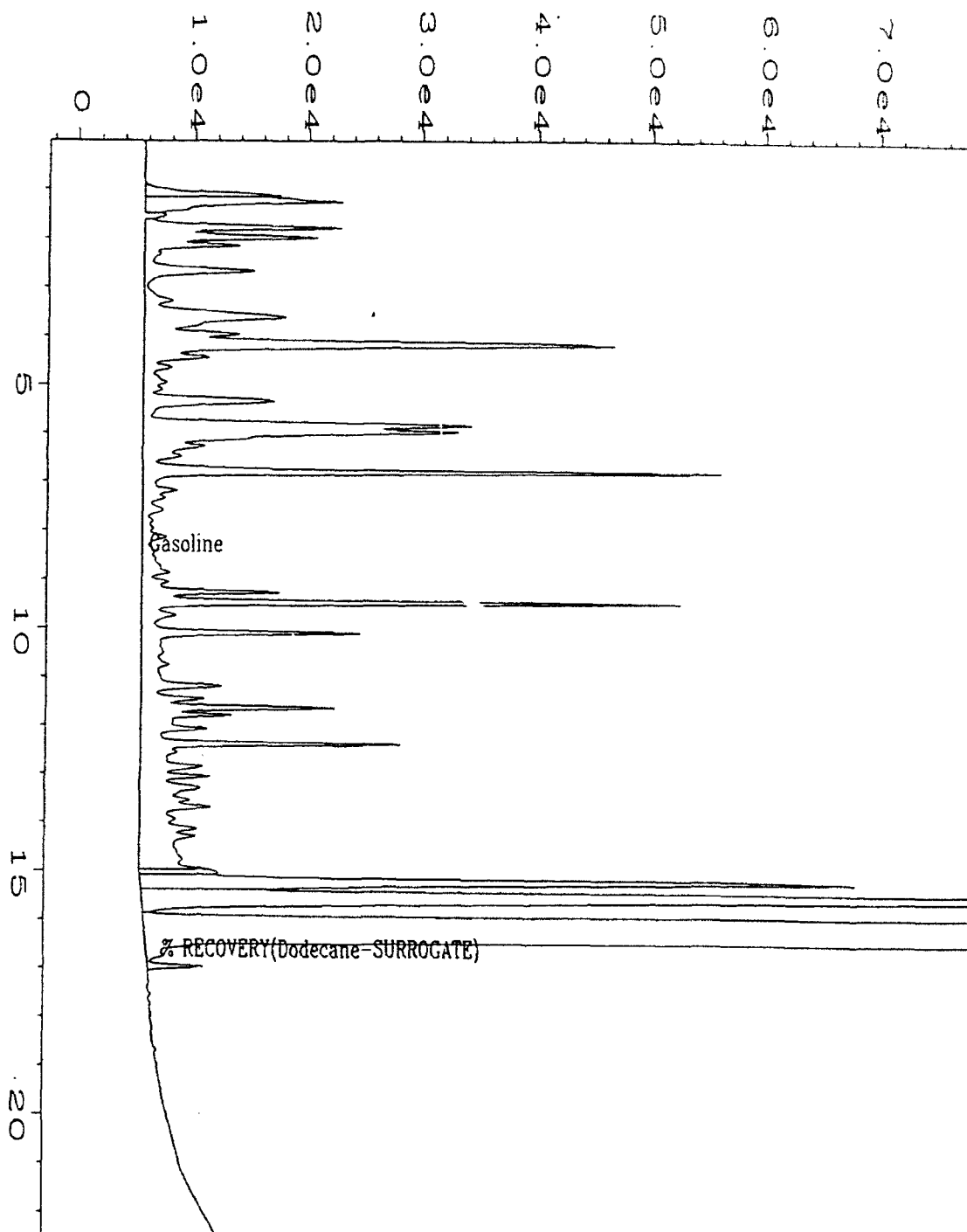
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.


Analyst


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Data File Name	: C:\HPCHEM\1\DATA\tvh0331\003F0201.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 3
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS033195	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: TVH0331.MTH
quired on	: 31 Mar 95 10:33 AM	Analysis Method	: TVH0331.MTH
Report Created on:	: 31 Mar 95 10:56 AM	Sample Amount	: 0
Last Recalib on	: 31 Mar 95 09:48 AM	ISTD Amount	:
Multiplier	: 1		

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TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS040295 Matrix : SOIL
Date Prepared : 4/2/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/2/95
Sequence Number : TVH8

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	2.00	1.75	88%	70%-130%

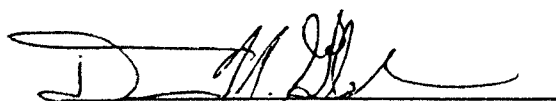
QUALIFIERS

U = TVH analyzed for but not detected.

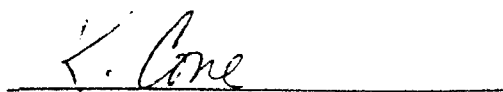
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

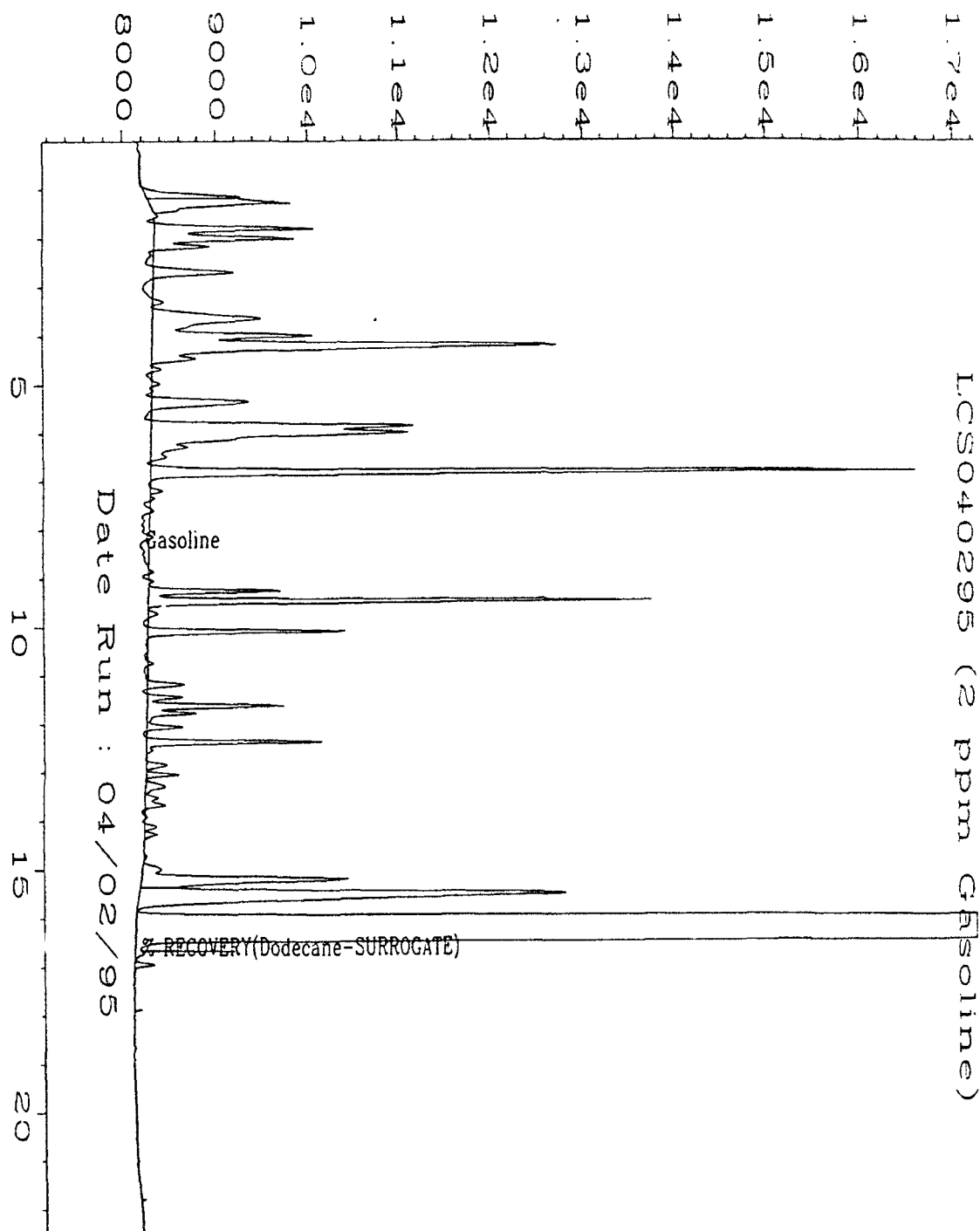
NA = Not Available.



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Data File Name	: C:\HPCHEM\1\DATA\TVH0402\008F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS040295	Sequence Line	: 8
Print Time Bar Code:		Instrument Method	: TVH0402.MTH
Printed on	: 02 Apr 95 02:20 PM	Analysis Method	: TVH0402.MTH
Report Created on:	02 Apr 95 04:17 PM	Sample Amount	: 0
Last Recalib on	: 02 Apr 95 01:38 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
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Anions

Date Sampled : 3/20,21/95 Client Project ID. : 722450.21020
Date Received : 3/22/95 Lab Project No. : /MacDill AFB
Date Prepared : 3/22/95 Method : EPA 300.0
Date Analyzed : 3/22/95 Matrix : Water
Detection Limit : 0.250 mg/L

Evergreen Client
Sample # Sample ID Chloride (mg/L)

X04546	24MP-5S	9.06
X04547	24MP-3S	6.51
X04548	24MP-3D	384
X04549	24MP-8D	347
X04550	24MP-8S	98.2
X04551	MD24-9	30.6
X04552	MD24-10A	370
X04553	MD24-10	140
X04554	MD24-7	8.77
X04555	MD24-7 (Dup)	8.19
Method Blank 3-22-95		<0.250

Quality Assurance

		<u>Spike Amount (mg/L)</u>	<u>Sample Result (mg/L)</u>	<u>Spike Result (mg/L)</u>	<u>% Recovery</u>
X04555	MD24-7 (Dup) Matrix Spike	10.0	8.77	18.3	95.5
X04555	MD24-7 (Dup) Matrix Spike Dup	10.0	8.77	19.2	104
	MS/MSD RPD				8.33
X04554/X04555 Dup	RPD				6.84

Debra A. Byers
Analyst

[Signature]
Approved

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Anions

Date Sampled : 3/20,21/95 Client Project ID. : 722450.21020
Date Received : 3/22/95 Lab Project No. : /MacDill AFB
Date Prepared : 3/22/95 Method : EPA 300.0
Date Analyzed : 3/22/95 Matrix : Water
Detection Limit : 0.076 mg/L

Evergreen Client
Sample # Sample ID Nitrite-N (mg/L)

X04546	24MP-5S	<0.076
X04547	24MP-3S	<0.076
X04548	24MP-3D	<0.760*
X04549	24MP-8D	<0.760*
X04550	24MP-8S	<0.076
X04551	MD24-9	<0.076
X04552	MD24-10A	<0.760*
X04553	MD24-10	<0.760*
X04554	MD24-7	<0.076
X04555	MD24-7 (Dup)	<0.076

Method Blank 3-22-95 <0.076

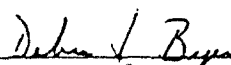
Quality Assurance **


		<u>Spike Amount (mg/L)</u>	<u>Sample Result (mg/L)</u>	<u>Spike Result (mg/L)</u>	<u>% Recovery</u>
X04555	MD24-7 (Dup) Matrix Spike	10.0	<0.250	9.81	98.1
X04555	MD24-7 (Dup) Matrix Spike Dup	10.0	<0.250	9.85	98.5
	MS/MSD RPD				0.407
X04554/X04555	Dup RPD				NC

* = Increased detection limit due to matrix interference.

** = Quality assurance results reported as Nitrite (NO₂).

NC = Not calculated because sample and/or duplication results below detection limit.


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Anions

Date Sampled : 3/20,21/95 Client Project ID. : 722450.21020
Date Received : 3/22/95 Lab Project No. : 95-0915
Date Prepared : 3/22/95 Method : EPA 300.0
Date Analyzed : 3/22/95 Matrix : Water
Detection Limit : 0.056 mg/L

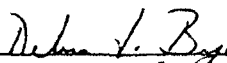
Evergreen Client
Sample # Sample ID Nitrate-N (mg/L)

X04546	24MP-5S	<0.056
X04547	24MP-3S	<0.056
X04548	24MP-3D	<0.056
X04549	24MP-8D	<0.056
X04550	24MP-8S	<0.056
X04551	MD24-9	<0.056
X04552	MD24-10A	1.09
X04553	MD24-10	<0.056
X04554	MD24-7	<0.056
X04555	MD24-7 (Dup)	<0.056
Method Blank 3-22-95		<0.056

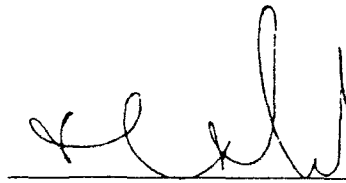
Quality Assurance **

		<u>Spike Amount (mg/L)</u>	<u>Sample Result (mg/L)</u>	<u>Spike Result (mg/L)</u>	<u>% Recovery</u>
X04555	MD24-7 (Dup) Matrix Spike	10.0	<0.250	9.46	94.6
X04555	MD24-7 (Dup) Matrix Spike Dup	10.0	<0.250	9.22	92.2
	MS/MSD RPD				2.57
X04554/X04555 Dup	RPD				NC

** = Quality assurance results reported as Nitrate (NO₃).
NC = Not calculated because sample and/or duplication results below
detection limit.



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4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 3/20,21/95 Client Project ID. : 722450.21020
Date Received : 3/22/95 Lab Project No. : /MacDill AFB
Date Prepared : 3/22/95 Method : EPA 300.0
Date Analyzed : 3/22/95 Matrix : Water
Detection Limit : 0.250 mg/L

Evergreen Client
Sample # Sample ID Sulfate (mg/L)

X04546	24MP-5S	37.4
X04547	24MP-3S	7.63
X04548	24MP-3D	30.5
X04549	24MP-8D	52.7
X04550	24MP-8S	38.9
X04551	MD24-9	28.0
X04552	MD24-10A	10.6
X04553	MD24-10	34.6
X04554	MD24-7	14.0
X04555	MD24-7 (Dup)	13.6

Method Blank 3-22-95 <0.250

Quality Assurance

		<u>Spike Amount (mg/L)</u>	<u>Sample Result (mg/L)</u>	<u>Spike Result (mg/L)</u>	<u>% Recovery</u>
X04555	MD24-7 (Dup) Matrix Spike	10.0	14.0	24.0	100
X04555	MD24-7 (Dup) Matrix Spike Dup	10.0	14.0	23.5	95.0
	MS/MSD RPD				5.13
X04554/X04555 Dup	RPD				2.53

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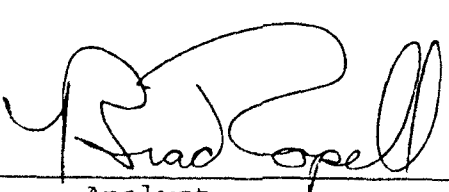
Miscellaneous Analyses

Date Sampled : 3/20,21/95 Client Project ID. : Mac Dill AFB
Date Received : 3/22/95 Lab Project No. : 95-0915
Date Prepared : 3/22/95 Detection Limit : 5.00 mgCaCO₃/L
Date Analyzed : 3/22/95 Method : EPA 310.1

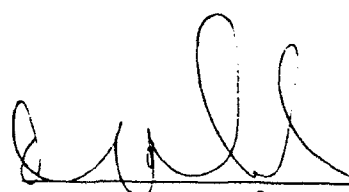
<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Matrix</u>	<u>Total Alkalinity</u> <u>(mgCaCO₃/L)</u>
X04546	24MP-5S	Water	333
X04547	24MP-3S	Water	202
X04548	24MP-3D	Water	188
X04549	24MP-8D	Water	232
X04550	24MP-8S	Water	215
X04552	MD24-10A	Water	206
X04552 Dup	MD24-10A Dup	Water	206
X04553	MD24-10	Water	252
Method Blank 3/22/95			<5.00

Quality Assurance

	<u>True Value</u> <u>(mgCaCO₃/L)</u>	<u>Result</u> <u>(mgCaCO₃/L)</u>	<u>%</u> <u>Recovery</u>
APG Reference Minerals Level 2 Lot #13862	11.8	10.8	91.5
X04552/04552 Dup RPD			0.19



Analyst



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HUFFMAN**LABORATORIES, INC.**

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NON-CLP ANALYSIS RESULTS

Date: 04/04/95

Lab Name: Huffman Labs

Contact: Sue Zeller

Sample Matrix:

Client: Evergreen Analytical

Contact: Patty McClellan

Huffman Lab #: 147195

Client Smp#	Lab ID #	Element/Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Instrument ID
56MP-3(4-6)	14719501	TC	NA	0.36	%	NA	03/31/95	0.412	Leco CR12	#7
56MP-3(4-6)	14719501	TC	NA	0.29	%	NA	03/31/95	0.820	Leco CR12	#7
56MP-6(4-6)	14719502	TC	NA	0.30	%	NA	03/31/95	0.611	Leco CR12	#7
56SS-2(4-6)	14719503	TC	NA	0.08	%	NA	03/31/95	0.952	Leco CR12	#7
56SS-12(4-6)	14719504	TC	NA	0.08	%	NA	03/31/95	0.925	Leco CR12	#7
56MP-3(4-6)	14719501	CC	NA	<0.02	%	NA	03/27/95	1.276	COU-02	tower
56MP-3(4-6)	14719501	CC	NA	<0.02	%	NA	03/27/95	1.407	COU-02	tower
56MP-6(4-6)	14719502	CC	NA	<0.02	%	NA	03/27/95	1.931	COU-02	tower
56SS-2(4-6)	14719503	CC	NA	<0.02	%	NA	03/27/95	1.271	COU-02	tower
56SS-12(4-6)	14719504	CC	NA	<0.02	%	NA	03/27/95	1.819	COU-02	tower
				% moisture		adjusted result				
56MP-3(4-6)	14719501	17.66 TOC	NA	0.36	0.44 %	NA	NA	NA	by calc	NA
56MP-3(4-6)	14719501	17.66 TOC	NA	0.29	0.35 %	NA	NA	NA	by calc	NA
56MP-6(4-6)	14719502	17.33 TOC	NA	0.30	0.36 %	NA	NA	NA	by calc	NA
56SS-2(4-6)	14719503	20.18 TOC	NA	0.08	0.10 %	NA	NA	NA	by calc	NA
56SS-12(4-6)	14719504	19.57 TOC	NA	0.08	0.10 %	NA	NA	NA	by calc	NA

Samples analyzed and results reported on as as received basis.

Soil samples are not homogeneous.

Values reported below Detection Limits are for reference only.

TC detection limit = 0.05%

CC detection limit = 0.02%

TOC detection limit = 0.05%

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NON-CLP ANALYSIS RESULTS

LABORATORY CONTROL STANDARD

Date: 04/04/95 Client: Evergreen Analytical
Lab Name: Huffman Labs Contact: Patty McClellan
Contact: Sue Zeller Huffman Lab #: 147195

LABORATORY CONTROL STANDARD

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
LCS	BN 4851	TC	3.35	3.41	102	%	03/31/95	Leco CR12	#7
LCS	BN 4056	CC	11.33	11.29	100	%	03/27/95	COU-02	tower

SPIKE RECOVERY

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
SPIKE	BN 4712	TC	17280	16231	94	ug C	03/31/95	Leco CR12	#7
SPIKE DUP	BN 4712	TC	18000	17490	97	ug C	03/31/95	Leco CR12	#7
SPIKE	BN 4712	CC	1408	1410	100	ug C	03/27/95	COU-02	tower
SPIKE DUP	BN 4712	CC	1355	1344	99	ug C	03/27/95	COU-02	tower

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NON-CLP QA/QC ANALYSIS RESULTS

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Date: 04/04/95 Client: Evergreen Analytical
Lab Name: Huffman Labs Contact: Patty McClellan
Contact: Sue Zeller Huffman Lab #: 147195

INITIAL CALIBRATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
ICS	BN 4712	TC	12.00	12.05	100	%	03/31/95	Leco CR12	#7
ICS	BN 4712	CC	12.00	11.97	100	%	03/27/95	COU-02	tower

Slope = NA

Intercept = NA

95% Correlation Coefficient = NA

Single point calibrations for this test.

CONTINUING CALIBRATION VERIFICATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
CCS	BN 4712	TC	12.00	11.83	99	%	03/31/95	Leco CR12	#7
CCS	BN 4712	TC	12.00	12.26	102	%	03/31/95	Leco CR12	#7
CCS	BN 4712	TC	12.00	12.23	102	%	03/31/95	Leco CR12	#7
CCS	BN 4712	CC	12.00	11.97	100	%	03/27/95	COU-02	tower
CCS	BN 4712	CC	12.00	11.92	99	%	03/27/95	COU-02	tower

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ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COULOMETER #	New Toner Ames
BALANCE #	10	XXXXXXXXXXXXXXX	

CALCIUM CARBONATE (STD #333) CaCO_3	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na_2CO_3	BOTTLE # 4056	% C THEORY = 11.33
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[illegible]

ANALYST <i>Carol Smock</i>	DATE <i>3-27-95</i> <i>3-28-95</i>	REVIEWED <i>JS</i>	DATE <i>3/28/95</i>	PAGE 1 OF 2
-------------------------------	--	-----------------------	------------------------	-------------

SPIKE IS SODIUM BICARBONATE 2164

$$0.1\% \text{CO}_2 / 0.03\% \text{CO}_3$$

REUSED : 100%

Prep Date 7/29/94



CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Project #: 95-1063

Parsons Engineering Science, Inc. (PES) Project: MacDill AFB
(722450.21020)

Sample Receipt

On April 1, 1995, twenty water samples and one trip blank were received in good condition at EAL with the following discrepancies: the samples arrived without a chain of custody. A copy of the chain of custody was faxed to EAL on April 3. Samples were received but not listed on the c.o.c. for MD24-26 TEPH, MD24-MW10A BTEX, MD24-MW10 BTEX, MD24-MW2 MS/MSD TEPH. These samples were analyzed as listed on the bottles per instruction from John Hicks of PES.

Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

BTEX, Water Matrix, Method E602

Samples MD75-MW3, MD75-MW14 and MD75-MW4 were analyzed within holding time with low surrogate recovery. The samples were re-run outside holding time with surrogate recoveries within EAL control limits. The original data are reported.

Samples MD75-MW8, MD75-MW14, 75MP-4S, MD75-MW4 and MD75-MW24 were also analyzed within holding times, but due to the presence of target compounds beyond linear range, required dilutions. These dilutions were performed outside of holding times. The original data are reported with extrapolated values for compounds out of the linear range of the instrument. The external standard reports and chromatograms for the diluted analyses are included.

Total Volatile Hydrocarbons (TVH), Water Matrix, Method 8015M

The relative percent difference (RPD) for the MS/MSD percent recoveries was outside the EAL control criteria. Please refer to the Laboratory Control Sample for acceptable spike recovery data. There were no other quality control anomalies to report.

Total Extractable Hydrocarbons (TEH), Water Matrix, Method 8015M

One sample was submitted labeled MS/MSD for TEH analysis and was not associated with a normal sample. Due to a laboratory error, the sample was prepped without spiking. The MS/MSD sample was analyzed as a normal sample. John Hicks of PES was notified on April 4, 1995.

Page Two
Case Narrative
Parsons Engineering Science

Samples 24MP-2S, MS24-MW6, MD24-MW2, MD24-MW26 and MS/MSD exhibited surrogate recoveries below the EAL control limits. The samples were injected a second time with similar recoveries, verifying that the results are not an instrument problem. The re-injected results are reported with an "R" qualifier. Samples should have been re-extracted but were not due to insufficient sample volume.

General Chemistry

There were no quality control anomalies to report.



Patricia A. McClellan, Project Manager

Evergreen Analytical Sample Log Sheet

Project # 95-1063

Date(s) Sampled: 3/31/95 COC

Date Due: 4/06/95-UST
4/17/95-OTHERS

ate Received: 4/01/95

Holding Time(s): 4/02-NO2, NO3
4/14-BTEX,TVH
Rush STANDARD

Client Project I.D. 722450.21020/MAC DILL

Client: PARSONS ENGINEERING SCIENCE

Shipping Charges N/A

Address: 1700 BROADWAY, SUITE 900

E.A. Cooler # 501

DENVER, CO. 80210

Airbill # H/D

Contact: TODD WIEDEMEIER

Custody Seal Intact? N
Cooler N/A Bottles N/A
COC Present Y
Sample Tags Present? Y
Sample Tags Listed? Y
Sample(s) Sealed? Y

Client P.O. _____

Phone #831-8100 Fax #831-8208

Special Instructions ALL BTEX AND VOA SAMPLES ARE TO INCLUDE CHLOROBENZENE,
TMB AND TEMB UNLESS OTHERWISE NOTED. AN MS/MSD AND LAB DUPLICATE IS TO BE
ANALYZED ON THIS CLIENT'S PROJECT. MS/MSD WILL BE REQUIRED FOR BTEX ONLY ON
THIS PROJECT.

Lab	Client				
Q #	ID#	Analysis	Mtx	Btl	Loc
X05167A/B	MD75-MW16	BTEX	W	40V	2
X05168A/B	75MP-2S	BTEX	W	40V	2
X05169A/B	MD75-MW12	BTEX	W	40V	2
X05170A	TRIP BLANK	BTEX	W	40V	2
X05171A/B	MD75-MW3	BTEX	W	40V	2
X05172A/B	MD75-MW8	BTEX	W	40V	2
X05173A/B	MD75-MW14	BTEX	W	40V	2
X05174A/B	75MP-4S	BTEX	W	40V	2
X05175A/B	MD75-MW4	BTEX	W	40V	2
X05176A/B	MD75-MW24	BTEX	W	40V	2
X05177A/B	MD75-MW6	BTEX	W	40V	2
X05179A/B	MD24-MW6	BTEX	W	40V	2
X05180A/B	MD24-MW6A	BTEX	W	40V	2
X05181A	FIELD BLANK	BTEX	W	40V	2

*Samples to be returned

Route GC/MS GC 2 Metals Wet Chem 2 SxPrep 1 SxRec 2
Acctg X Adm1 X Adm2 X QA/QC X Sales X File X

Page 1 of 3 Page(s)

Custodian/Date: SC 4/4/95

DM 4/25/95

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X05182A	RINSEATE BLANK	BTEX	W	40V	2
X05186A/B	MD24-MW10A	BTEX	W	40V	2
X05187A/B	MD24-MW10	BTEX	W	40V	2
X05167C/D	MD75-MW16	TVPH	W	40V	2
X05168C/D	75MP-2S	TVPH	W	40V	2
X05169C/D	MD75-MW12	TVPH	W	40V	2
X05171C/D	MD75-MW3	TVPH	W	40V	2
X05172C/D	MD75-MW8	TVPH	W	40V	2
X05173C/D	MD75-MW14	TVPH	W	40V	2
X05174C/D	75MP-4S	TVPH	W	40V	2
X05175C/D	MD75-MW4	TVPH	W	40V	2
X05176C/D	MD75-MW24	TVPH	W	40V	2
X05177C/D	MD75-MW6	TVPH	W	40V	2
X05169E	MD75-MW12	TEPH	W	1LA	C2
X05172E	MD75-MW8	TEPH	W	1LA	C2
X05175E	MD75-MW4	TEPH	W	1LA	C2
X05178E	24MP-2S	TEPH	W	1LA	C2
X05179E	MD24-MW6	TEPH	W	1LA	C2
X05183E	MD24-MW2	TEPH	W	1LA	C2
X05184E	MD24-26	TEPH	W	1LA	C2
X05185E	MD24-MW2 MS/MSD	TEPH	W	1LA	C2
X05167E	MD75-MW16	ANIONS	W	125P	C2
X05168E	75MP-2S	ANIONS	W	125P	C2
X05169F	MD75-MW12	ANIONS	W	125P	C2
X05171E	MD75-MW3	ANIONS	W	125P	C2
X05172F	MD75-MW8	ANIONS	W	125P	C2
X05173E	MD75-MW14	ANIONS	W	125P	C2
X05174E	75MP-4S	ANIONS	W	125P	C2
X05175F	MD75-MW4	ANIONS	W	125P	C2
X05176E	MD75-MW24	ANIONS	W	125P	C2
X05177E	MD75-MW6	ANIONS	W	125P	C2
X05169G	MD75-MW12	ALKALINITY	W	250P	C2
X05171F	MD75-MW3	ALKALINITY	W	250P	C2

Evergreen Analytical Inc.

4026 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

Page 1 of 2

CLIENT CONTACT (pm) Todd Winkler

PROJECT ID 722458-21020

REAL QUOTE? PO#

TURNAROUND REQUIRED 30 days

*expedited turnaround subject to additional fee

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Evergreen Analytical Inc.

4006 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-8021
FAX (303) 425-6854
(800) 645-7400

CLIENT CONTACT FORM:

PROJECT I.D. 722-

151000-763

TURNAROUND REQUIRED*

Sample Name:

Signature: Richard L. Liddell

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Ernesto A. Cordero, Jr.

22/01/2020

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Additional information:

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IDENTIFICATION SAMPLES - ME

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D24-mw2 3/3/95 15:57

2024-11-23 15:15

[illegible]

MS (75)	3131195	1600
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24-MW/CA 32 KC 11/10

[illegible]

07011511K1012014-63700

10

1947

1

John J. [Signature]

10

10

Evergreen Analytical Sample Receipt/Check-in Record

Date & Time Rec'd: 4/1/95 1000 Shipped Via: HD

Client : PARSONS (Airbill # if applicable)

Client Project ID(s): PARSONS 722450-21020

EAL Project # (s): 95-1063 EAL Cooler(s): (Y)

Cooler# 501

Ice packs Y N Y N Y N Y N Y N

Temperature °C

	Y	N	N/A
1. Custody seal(s) present:			
Seals on cooler intact		✓	✓
Seals on bottle intact			✓

2. Chain of Custody present:

3. Containers broken or leaking:
(Comment on COC if Y)

4. Containers labeled:

5. COC agrees w/ bottles received:
(Comment on COC if N)

6. COC agrees w/ labels:
(Comment on COC if N)

7. Headspace in VOA vials-waters only
(comment on COC if Y)

8. VOA samples preserved:

9. pH measured on metals, cyanide or phenolics*:
List discrepancies
*Non-EAL provided containers only, water samples only.

10. Metal samples present:
Total _____, Dissolved _____
D or PD to be filtered:
T,TR,D,PD to be Preserved:

11. Short holding times:
Specify parameters

12. Multi-phase sample(s) present:

13. COC signed w/ date/time:

Comments:

(Additional comments on back)
Custodian Signature/Date: Lee Connor 4/3/95

*send once later
4/3 1000 AM*

CLIENT CONTACT (print) Todd Wedemeyer
PROJECT ID. 722450-21020
EAL QUOTE # _____ PO.# _____
TURNAROUND REQUIRED* 30 days
*expedited turnaround subject to additional fee

Sampler Name:

(signature) mark Vesely
(print) MARK VESSELY

Evergreen Analytical Cooler No. 501

Cooler Received

Please **PRINT**

all information:

CLIENT
SAMPLE

SAMPLE IDENTIFICATION	DATE SAMPLED
--------------------------	-----------------

IDENTIFICATION	SAMPLED	TIME	Z
MD 75 - mw 16	3/31/95	8:15	5
75 MP - 2 S	3/31/95	8:50	5
MD 75 - mw 12	3/31/95	9:30	7
Trip Blank			1
MO 75 - mw 3	3/31/95	10:20	6
MD 75 - mw 8	3/31/95	11:15	7
MD 75 - mw 14	3/31/95	12:05	5
75 MP - 4 BS	3/31/95	13:00	5
MD 75 - mw 4	3/31/95	13:45	7
MD 75 - mw 24	3/31/95	1345	6

HT:

DD:

[illegible]

Instructions: Samples packed in I.C.F.

Samples Received 4-1-95 Jimmie Gun 1030

Relinquished by (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by (Signature)	Date/Time
Mark Vennart	3/11/95	Feder		Feder		C. M. Vennart	3/11/95

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Page 2 of 2

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY PERSONS ENGINEERING SCIENCE
ADDRESS 1200 BROADWAY, SUITE 900
CITY DENVER STATE CO ZIP 80202
PHONE# 303-831-8100 FAX#

CLIENT CONTACT (print) Todd W. de meier
PROJECT I.D. 722450-21020
EAL QUOTE # P.O.#
TURNAROUND REQUIRED* 30 DAYS
*expedited turnaround subject to additional fee

Sampler Name:

(signature) Mark Vesely
(print) MARK VESLEY

Evergreen Analytical Cooler No. _____

Cooler Received _____

Please PRINT

all information:

CLIENT
SAMPLE
IDENTIFICATION

DATE
SAMPLED

TIME

No. of Containers

Water/Drinking/Discharge/Runoff

(circle)

Soil / Solid

Oil / Sludge

MATRIX

ANALYSIS REQUESTED

EAL use only
Do not write
in shaded area

EAL

Project #

Custodian

EAL Sample No.

HT:

DD:

Location

Container Size

Instructions: Samples Packed in Ice

Samples 4-145

Received 1030

Relinquished by (Signature) _____ Date/Time _____ Received by (Signature) _____ Date/Time _____ Page/Time _____

MD24-MW6
- don't understand
- cant QC this

- so cant QC
Total BTEX

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-MW6~	Client Project No.	: 722450.21020/Mac Dill
Lab Sample Number	: X05179	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	Dilution Factor	: 1.00
Date Received	: 4/1/95	Method	: 602
Date Prepared	: 4/14/95	Matrix	: Water
Date Analyzed	: 4/14/95	Lab File No.	: BX1041346
		Method Blank No.	: MB041495

Compound Name	Cas Number	Sample Concentration	RL
		ug/L	ug/L
Benzene	71-43-2	>80 **	0.4
Toluene	108-88-3	2.2	0.4
Chlorobenzene	108-90-7	1.3	0.4
Ethyl Benzene	100-41-4	25	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	6.7	0.4
1,3,5-Trimethylbenzene	108-67-8	0.5	0.4
1,2,4-Trimethylbenzene	95-63-6	1.0	0.4
1,2,3-Trimethylbenzene	526-73-8	2.3	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	8.5	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = Greater than 10% of the calibration range.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

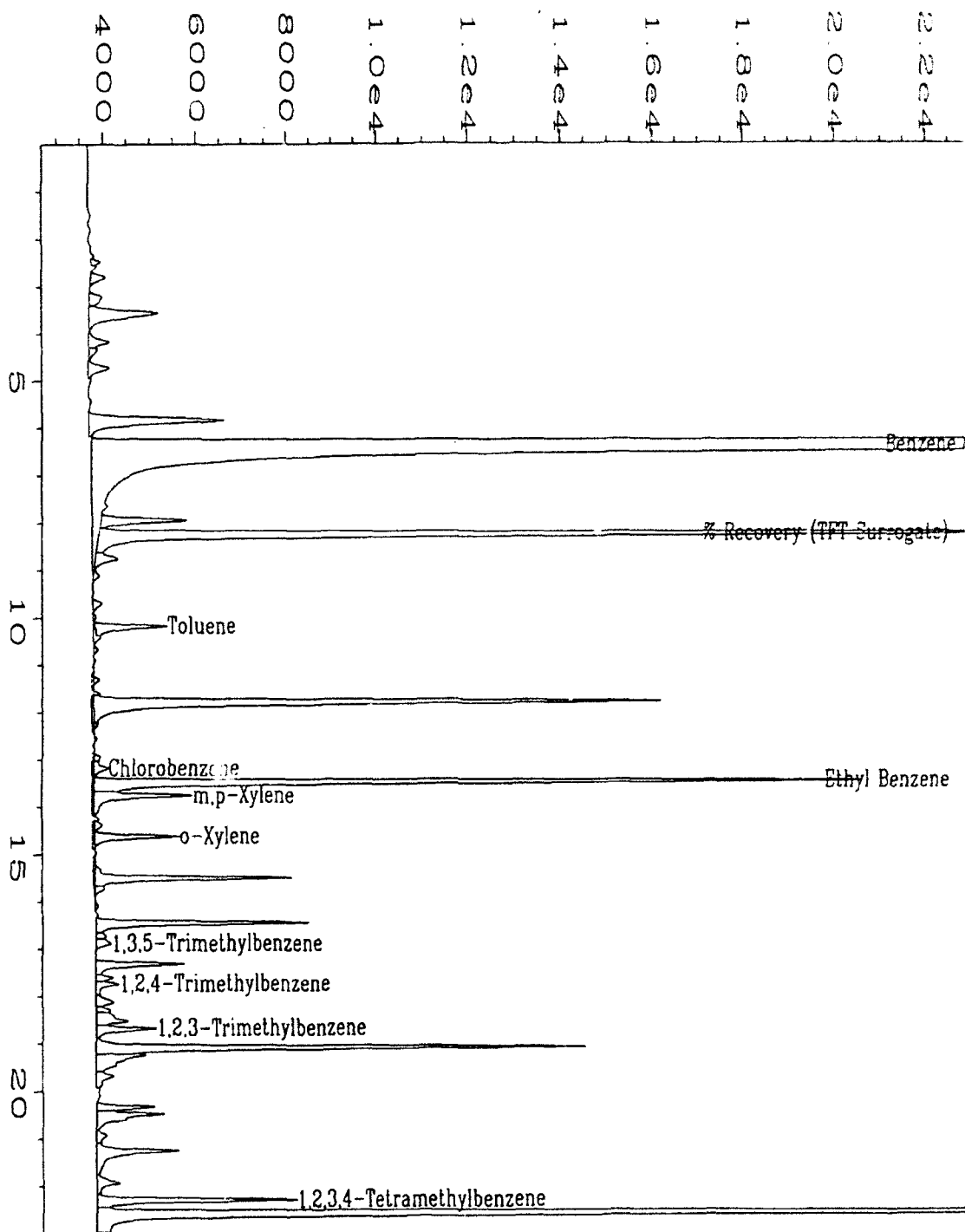
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

AmCleb
Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10413\046F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 46
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05179;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10414
Acquired on	: 14 Apr 95 05:24 PM	Analysis Method	: BX10414B.M
Report Created on	: 27 Apr 95 07:27 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD24-MW6 Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602/8020 Data Report

Client Sample Number	: MD24-MW6	Client Project No.	: 722450.21020/MAC DIL
Lab Sample Number	: X05179	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	Dilution Factor	: 100
Date Received	: 4/1/95	Matrix	: Water
Date Prepared	: 4/14/95	Lab File No.	: BX20415015R
Date Analyzed	: 4/14/95	Method Blank No.	: MB041495

Compound Name	Cas Number	Sample Concentration (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	480	40

Surrogate Recovery: 77% 70%-130% (QC limits)

QUALIFIERS/NOTES:

E = Extrapolated value. Value exceeds calibration range.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

Total xylenes consist of three isomers, two of which co-elute. The xylene RL is for a single peak.

T. RL

Analyst

Amckell

Approved

External Standard Report

Data File Name : C:\HPCHEM\2\DATA\BX20415\015R0101.D
 Operator : T. Lockwood Page Number : 1
 Instrument : BTEX2 Vial Number : 15
 Sample Name : X05179;100;0.05 Injection Number : 1
 Run Time Bar Code: Sequence Line : 1
 Acquired on : 15 Apr 95 09:21 PM Instrument Method: BX20415.MTH
 Report Created on: 16 Apr 95 04:43 PM Analysis Method : BX20415A.MTH
 Last Recalib on : 16 Apr 95 03:38 PM Sample Amount : 0
 Multiplier : 1 x 100 ISTD Amount :

Sig. 2 in C:\HPCHEM\2\DATA\BX20415\015R0101.D

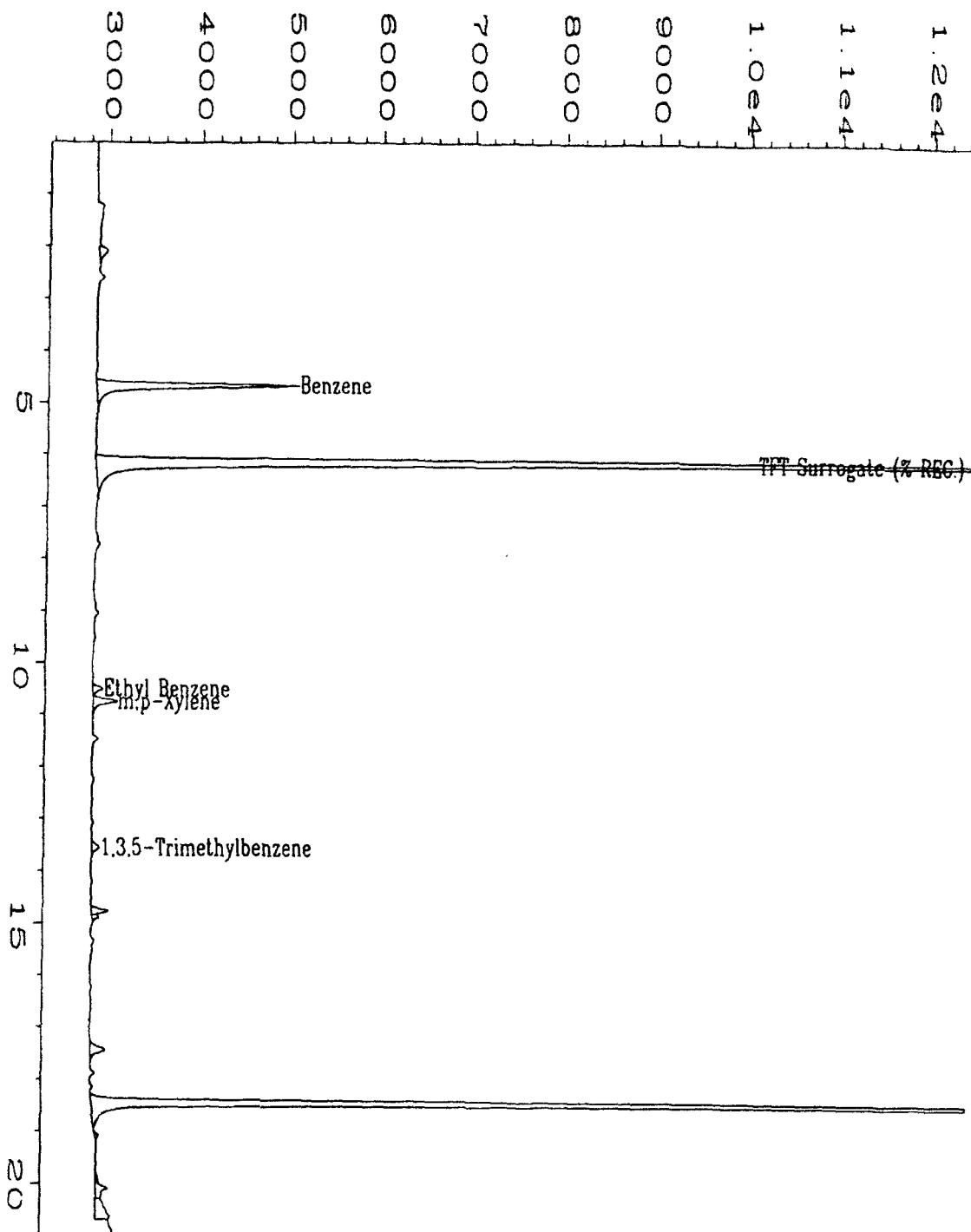
Ret Time	Area	Type	Width	Ref#	ug/L	Name
4.655	13992	BB	0.096	1	4.787	Benzene $\times 100 = 480$
6.138	76837	BB	0.097	1-R	77.193	TFT Surrogate (% REC.)
7.729	* not found *			1		Toluene $\Delta F = 50$
10.248	* not found *			1		Chlorobenzene
10.495	656	BV	0.096	1	0.286	Ethyl Benzene $\Delta F = 50$
10.734	1691	VB	0.099	1	0.601	m,p-Xylene $\Delta F = 50$
11.474	* not found *			1		o-Xylene $\Delta F = 50$
13.542	640	BB	0.126	1	0.197	1,3,5-Trimethylbenzene
14.442	* not found *			1		1,2,4-Trimethylbenzene
15.390	* not found *			1		1,2,3-Trimethylbenzene $\Delta F = 50$
18.176	* not found *			1		1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
2	6.120	6.138	0.018

Not all calibrated peaks were found

Holding Time
up

not used
17



Data File Name	: C:\HPCHEM\2\DATA\BX20415\015R0101.D	Page Number	: 1
Operator	: T. Lockwood	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05179;100;0.05	Sequence Line	: 1
Time Bar Code:		Instrument Method	: BX20415.MTH
Acquired on	: 15 Apr 95 09:21 PM	Analysis Method	: BX20415A.MTH
Report Created on:	: 16 Apr 95 04:43 PM	Sample Amount	: 0
Last Recalib on	: 16 Apr 95 03:38 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-MW6	Client Project No.	: 722450.21020/Mac C
Lab Sample Number	: X05179	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	Dilution Factor	: 1.00
Date Received	: 4/1/95	Method	: 602
Date Prepared	: 4/14/95	Matrix	: Water
Date Analyzed	: 4/14/95	Lab File No.	: BX1041346
		Method Blank No.	: MB041495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	>80 **	0.4
Toluene	108-88-3	2.2	0.4
Chlorobenzene	108-90-7	1.3	0.4
Ethyl Benzene	100-41-4	25	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	6.7	0.4
1,3,5-Trimethylbenzene	108-67-8	0.5	0.4
1,2,4-Trimethylbenzene	95-63-6	1.0	0.4
1,2,3-Trimethylbenzene	526-73-8	2.3	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	8.5	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = Greater than 10% of the calibration range.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K Cone
Analyst

AmCleb
Approved

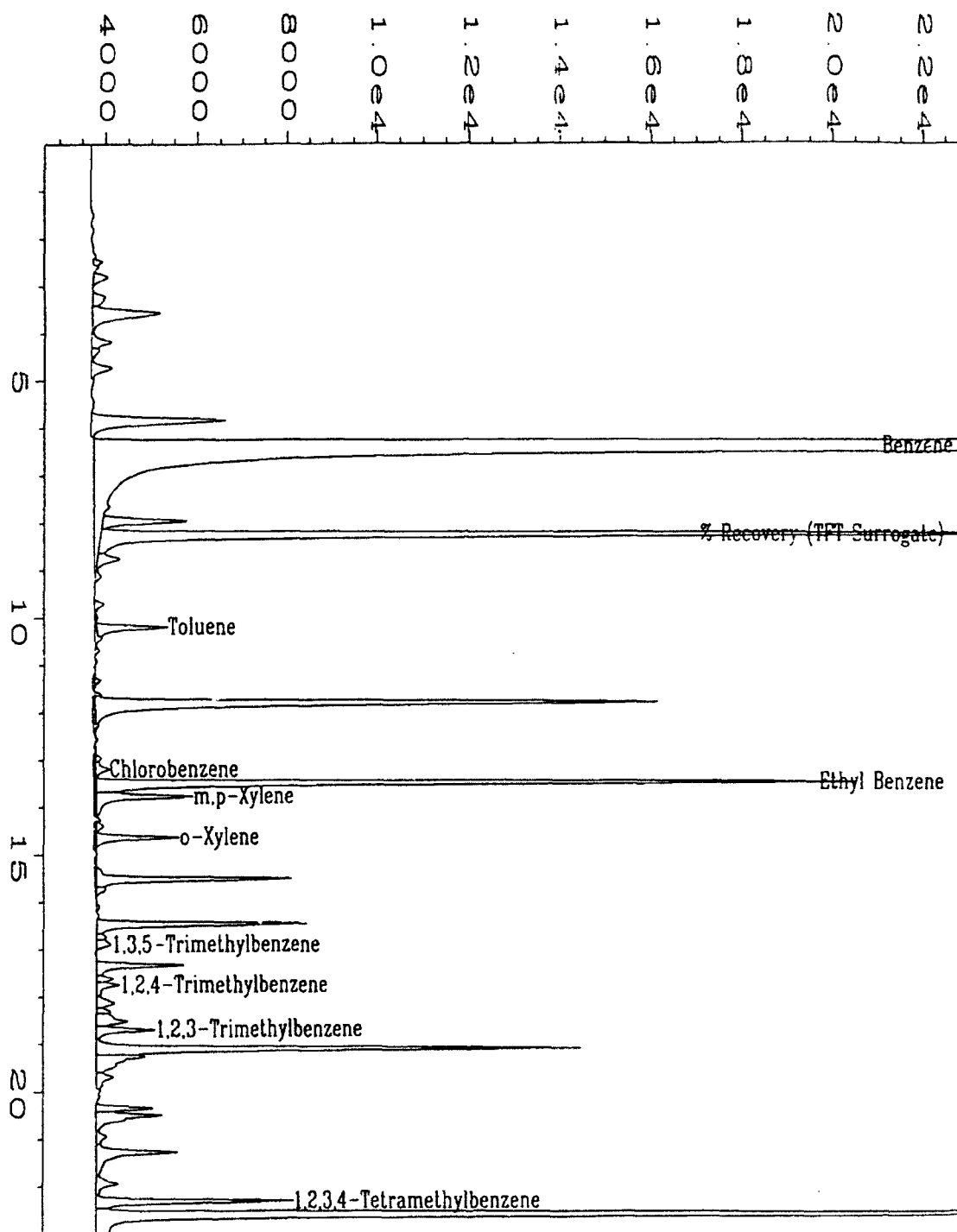
External Standard Report

File Name : C:\HPCHEM\1\DATA\BX10413\046F0101.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX1 Vial Number : 46
 Sample Name : X05179;1;5 Injection Number : 1
 Run Time Bar Code: Sequence Line : 1
 Acquired on : 14 Apr 95 05:24 PM Instrument Method: BX10414.MTH
 Report Created on: 27 Apr 95 07:27 PM Analysis Method : BX10414B.MTH
 Last Recalib on : 15 APR 95 01:55 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :
 Sample Info : Project#: 95-1063 Client#: MD24-MW6 Water

Sig. 1 in C:\HPCHEM\1\DATA\BX10413\046F0101.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
6.388	1.45276E+007	HBAS	0.099	1	3137.814	Benzene
8.245	149044	VV T	0.101	1-R	96.366	% Recovery (TFT Surrogate)
10.179	9490	PB T	0.096	1	2.190	Toluene
13.179	3482	VV T	0.143	1	1.324	Chlorobenzene
13.476	94526	VV T	0.087	1	25.389	Ethyl Benzene
13.756	17004	VV T	0.113	1	3.692	m,p-Xylene
14.621	11775	VV T	0.095	1	2.968	o-Xylene
6.887	2557	VV	0.121	1	0.514	1,3,5-Trimethylbenzene
17.745	3592	VV	0.105	1	0.987	1,2,4-Trimethylbenzene
18.687	7823	VV	0.091	1	2.339	1,2,3-Trimethylbenzene
22.301	24962	HH	0.088	1	8.549	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
2	8.228	8.245	0.017



Data File Name	: C:\HPCHEM\1\DATA\BX10413\046F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 46
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05179;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10414.METHOD
Acquired on	: 14 Apr 95 05:24 PM	Analysis Method	: BX10414B.METHOD
Report Created on	: 27 Apr 95 07:27 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD24-MW6 Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : MD24-MW10
Lab Sample Number : X05187
Date Sampled : 3/31/95
Date Received : 4/1/95
Date Prepared : 4/14/95
Date Analyzed : 4/14/95
Client Project No. : 722450.21020/Mac Dill
Lab Project No. : 95-1063
Dilution Factor : 1.00
Method : 602
Matrix : Water
Lab File No. : BX1041354
Method Blank No. : MB041495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		83%	70%-130% (QC limits)

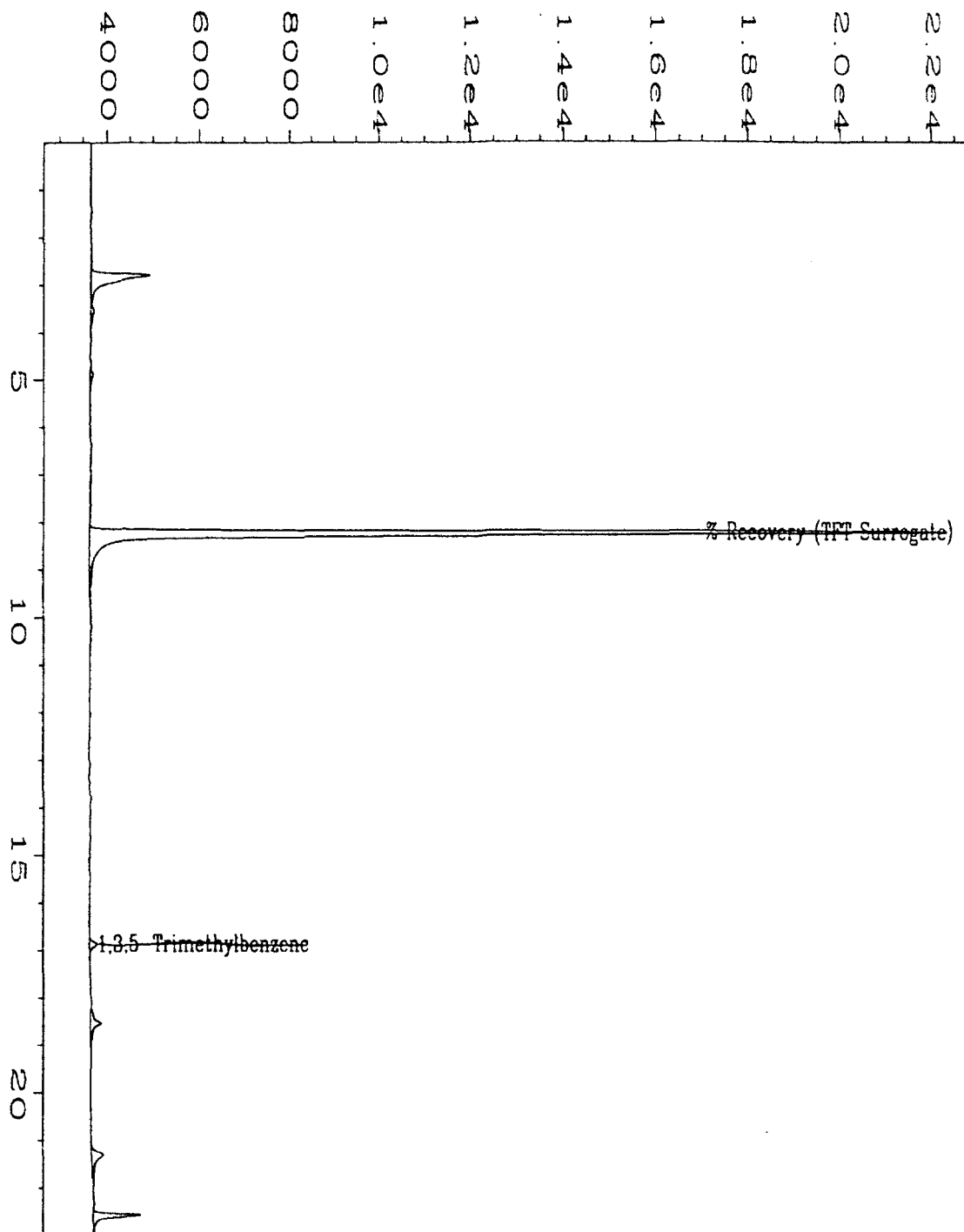
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

AmClegg
Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10413\054F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 54
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05187;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10414 H
Acquired on	: 14 Apr 95 10:40 PM	Analysis Method	: BX10414B.MT
Report Created on:	27 Apr 95 08:05 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD24-MW10	Water	

pm 4/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-MW10A	Client Project No.	: 722450.21020/Mac Dill
Lab Sample Number	: X05186	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	Dilution Factor	: 1.00
Date Received	: 4/1/95	Method	: 602
Date Prepared	: 4/14/95	Matrix	: Water
Date Analyzed	: 4/14/95	Lab File No.	: BX1041351
		Method Blank No.	: MB041495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	56-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		84%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

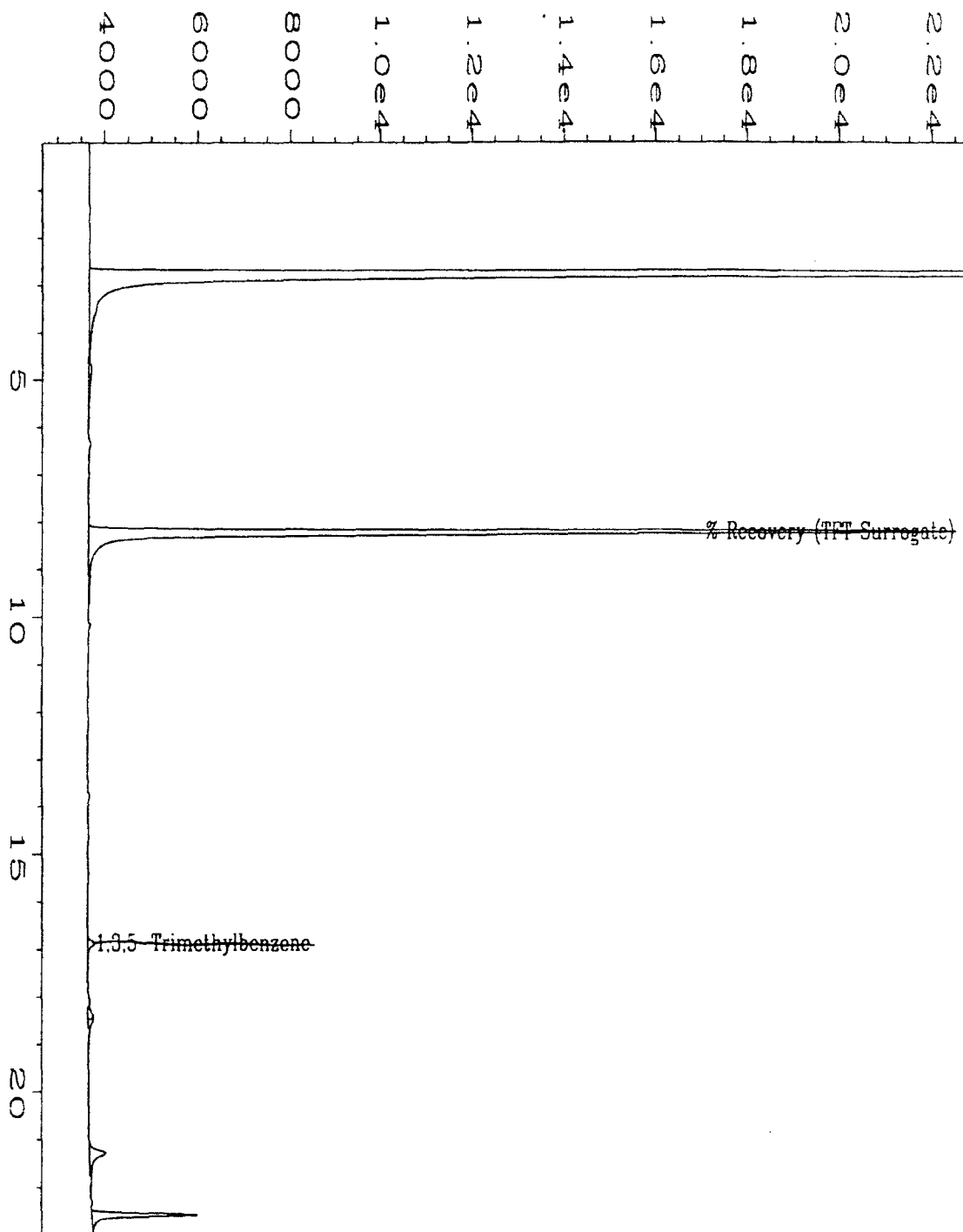
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McCalla
Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10413\051F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 51
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05186;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10414.
Acquired on	: 14 Apr 95 08:41 PM	Analysis Method	: BX10414B.m.FH
Report Created on:	27 Apr 95 08:03 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD24-MW10A Water		

Am 4/23/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MD24-MW10A	Client Project No.	: 722450.21020/Mac Dill
Lab Sample Number	: X05186DUP	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	Dilution Factor	: 1.00
Date Received	: 4/1/95	Method	: 602
Date Prepared	: 4/14/95	Matrix	: Water
Date Analyzed	: 4/14/95	Lab File No.	: BX1041353
		Method Blank No.	: MBO41495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	103-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	0.8	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		79%	70%-130% (QC limits)

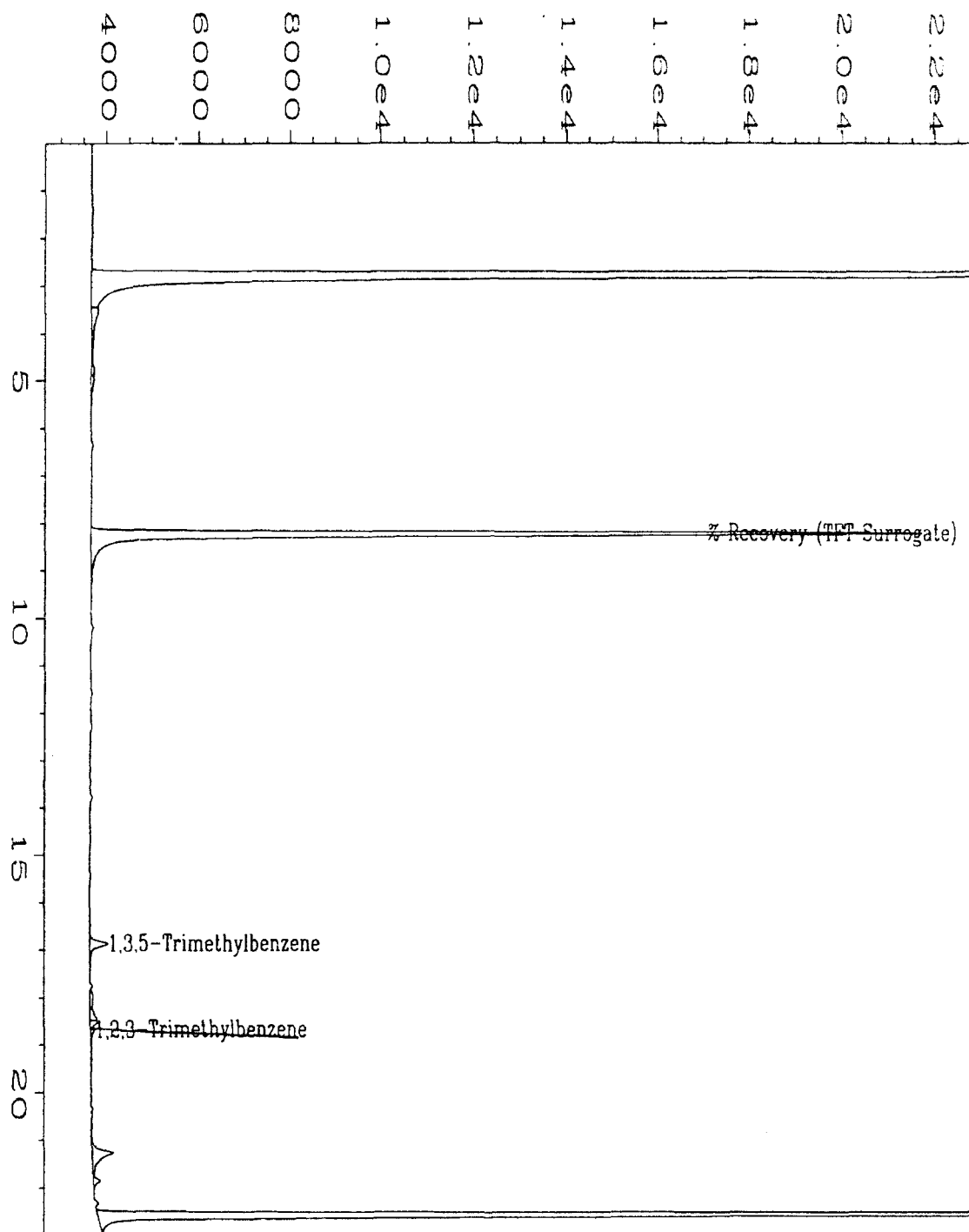
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

A. McClellan
Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10413\053F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 53
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05186DUP;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10414 H
Acquired on	: 14 Apr 95 10:00 PM	Analysis Method	: BX10414B.MT
Report Created on:	: 27 Apr 95 08:04 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD24-MW10A Water		

2m 4/28/95

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MD75-MW16	Client Project No.	: 722450.21020
Lab Sample No.	: X05167	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	EPA Method No.	: 602
Date Received	: 4/1/95	Matrix	: Water
Date Prepared	: 4/13/95	Lab File Number(s)	: BX1041414,15
Date Analyzed	: 4/13/95	Method Blank	: MB041395

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	44.8	58.9	70.5	50-150
Toluene	20.0	0.9	16.5	78.0	50-148
Ethyl Benzene	20.0	108.0 E	118.1 E	50.5	50-150
m,p-Xylene	40.0	2.7	36.2	93.7	50-150
o-Xylene	20.0	0.0	15.6	78.0	50-150
Chlorobenzene	20.0	0.7	16.6	79.5	55-135
1,3,5-TMB	20.0	0.0	16.3	81.4	50-150
1,2,4-TMB	20.0	1.4	20.3	94.5	50-150
1,2,3-TMB	20.0	0.9	18.0	85.7	50-150
1,2,3,4-TeMB	20.0	49.6	68.0 E	92.0	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20.0	57.2	61.8	3.3	25	50-150
Toluene	20.0	16.1	76.2	0.6	25	50-148
Ethyl Benzene	20.0	114.7 E	33.4	10.2	25	50-150
m,p-Xylene	40.0	35.3	81.5	0.7	25	50-150
o-Xylene	20.0	15.3	76.5	0.5	25	50-150
Chlorobenzene	20.0	16.3	78.0	0.5	25	55-135
1,3,5-TMB	20.0	16.1	80.5	0.3	25	50-150
1,2,4-TMB	20.0	20.0	93.0	0.4	25	50-150
1,2,3-TMB	20.0	17.7	84.0	0.5	25	50-150
1,2,3,4-TeMB	20.0	66.9 E	86.5	1.5	25	50-150

* = Values outside of QC limits.

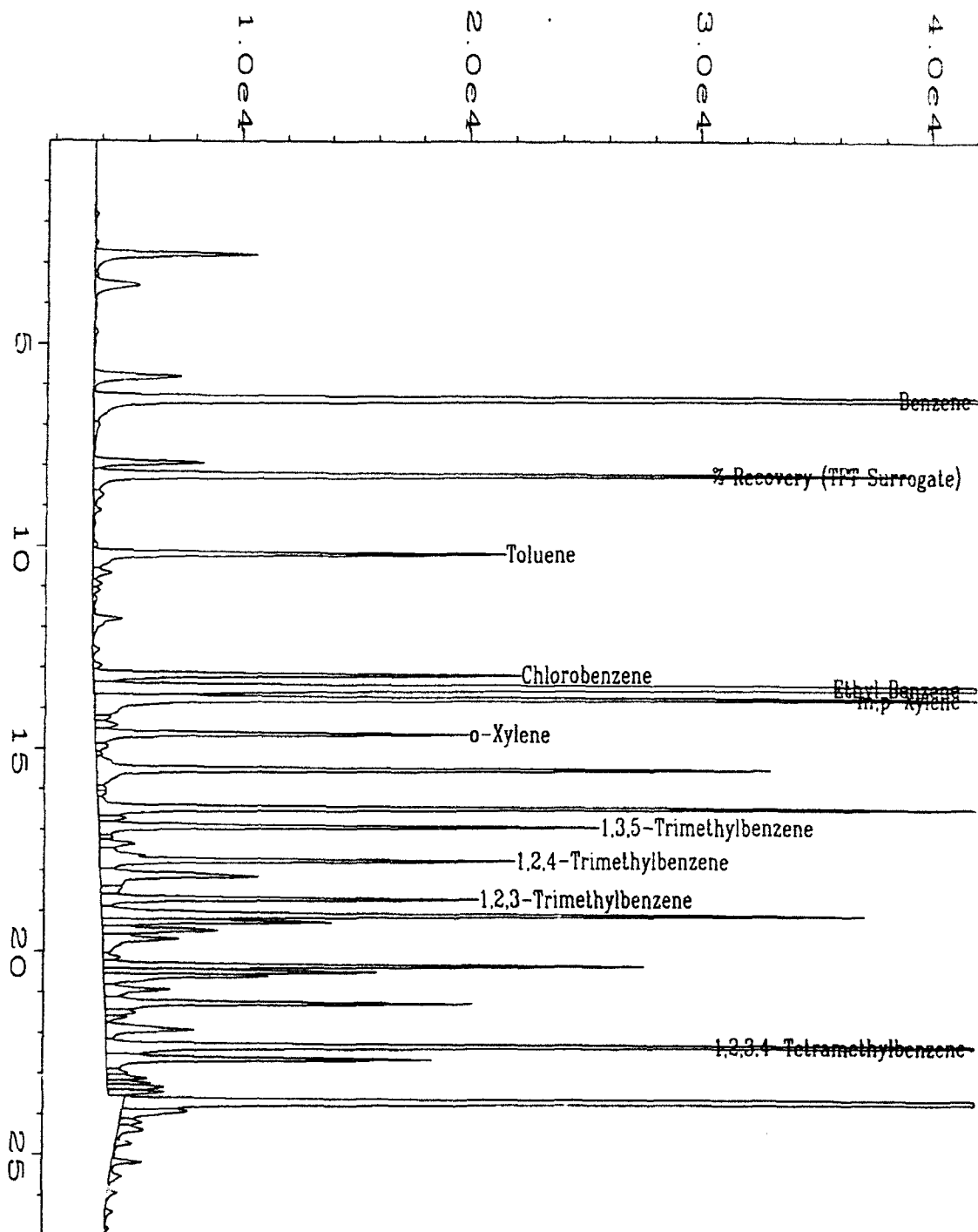
RPD: 0 out of (10) outside limits.

Spike Recovery: 1 out of (20) outside limits.

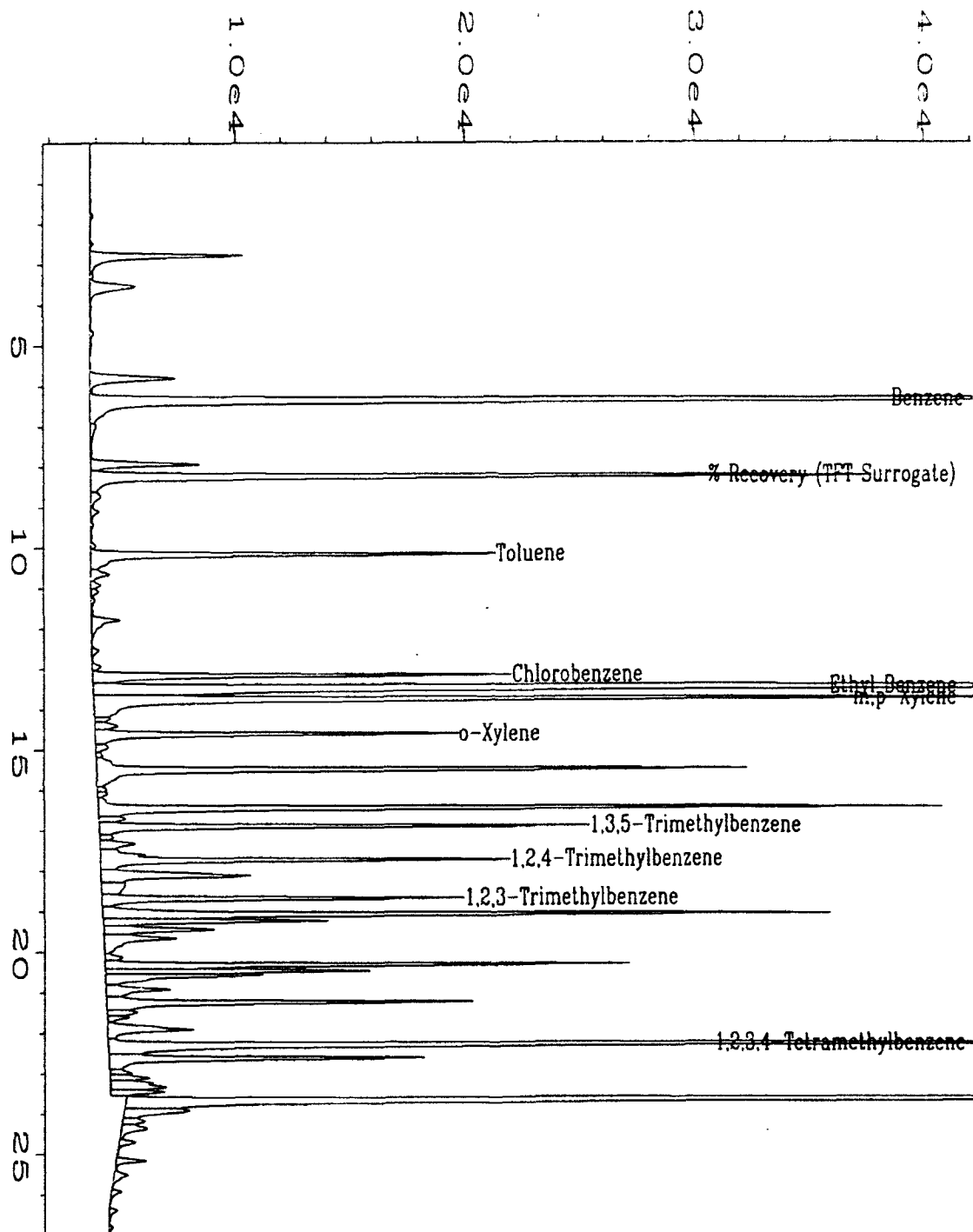
Comments: E = Exceeds calibration range.

K. Cone
Analyst

AmCeele
Approved
MS1063A.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10413\016F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05167MS;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10413 T
Acquired on	: 13 Apr 95 09:35 PM	Analysis Method	: BX10413A.MT
Report Created on	: 13 Apr 95 10:02 PM	Sample Amount	: 0
Last Recalib on	: 13 APR 95 04:13 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD75-MW16 Water		



Data File Name	: C:\HPCHEM\1\DATA\BX10413\017F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 17
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05167MSD;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10413A.MTH
quired on	: 13 Apr 95 10:14 PM	Analysis Method	: BX10413A.MTH
Report Created on:	: 13 Apr 95 10:42 PM	Sample Amount	: 0
Last Recalib on	: 13 APR 95 04:13 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD75-MW16 Water		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MD75-MW24	Client Project No.	: 722450.2102
Lab Sample No.	: X05176	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	EPA Method No.	: 602
Date Received	: 4/1/95	Matrix	: Water
Date Prepared	: 4/14/95	Lab File Number(s)	: BX1041443,44
Date Analyzed	: 4/14/95	Method Blank	: MB041495

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	127.7 E	138.5 E	54.0	50-150
Toluene	20.0	3.1	19.6	82.5	50-148
Ethyl Benzene	20.0	**	**	**	50-150
m,p-Xylene	40.0	0.0	57.0	142.5	50-150
o-Xylene	20.0	0.7	15.4	73.5	50-150
Chlorobenzene	20.0	2.9	18.8	79.5	55-135
1,3,5-TMB	20.0	0.0	15.0	75.0	50-150
1,2,4-TMB	20.0	2.1	18.3	81.0	50-150
1,2,3-TMB	20.0	1.6	16.7	75.5	50-150
1,2,3,4-TeMB	20.0	83.3 E	99.2 E	79.5	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20.0	NA	NA	NA	25	50-150
Toluene	20.0	NA	NA	NA	25	50-148
Ethyl Benzene	20.0	NA	NA	NA	25	50-150
m,p-Xylene	40.0	NA	NA	NA	25	50-150
o-Xylene	20.0	NA	NA	NA	25	50-150
Chlorobenzene	20.0	NA	NA	NA	25	55-135
1,3,5-TMB	20.0	NA	NA	NA	25	50-150
1,2,4-TMB	20.0	NA	NA	NA	25	50-150
1,2,3-TMB	20.0	NA	NA	NA	25	50-150
1,2,3,4-TeMB	20.0	NA	NA	NA	25	50-150

* = Values outside of QC limits.

RPD: 0 out of (0) outside limits.

Spike Recovery: 0 out of (10) outside limits.

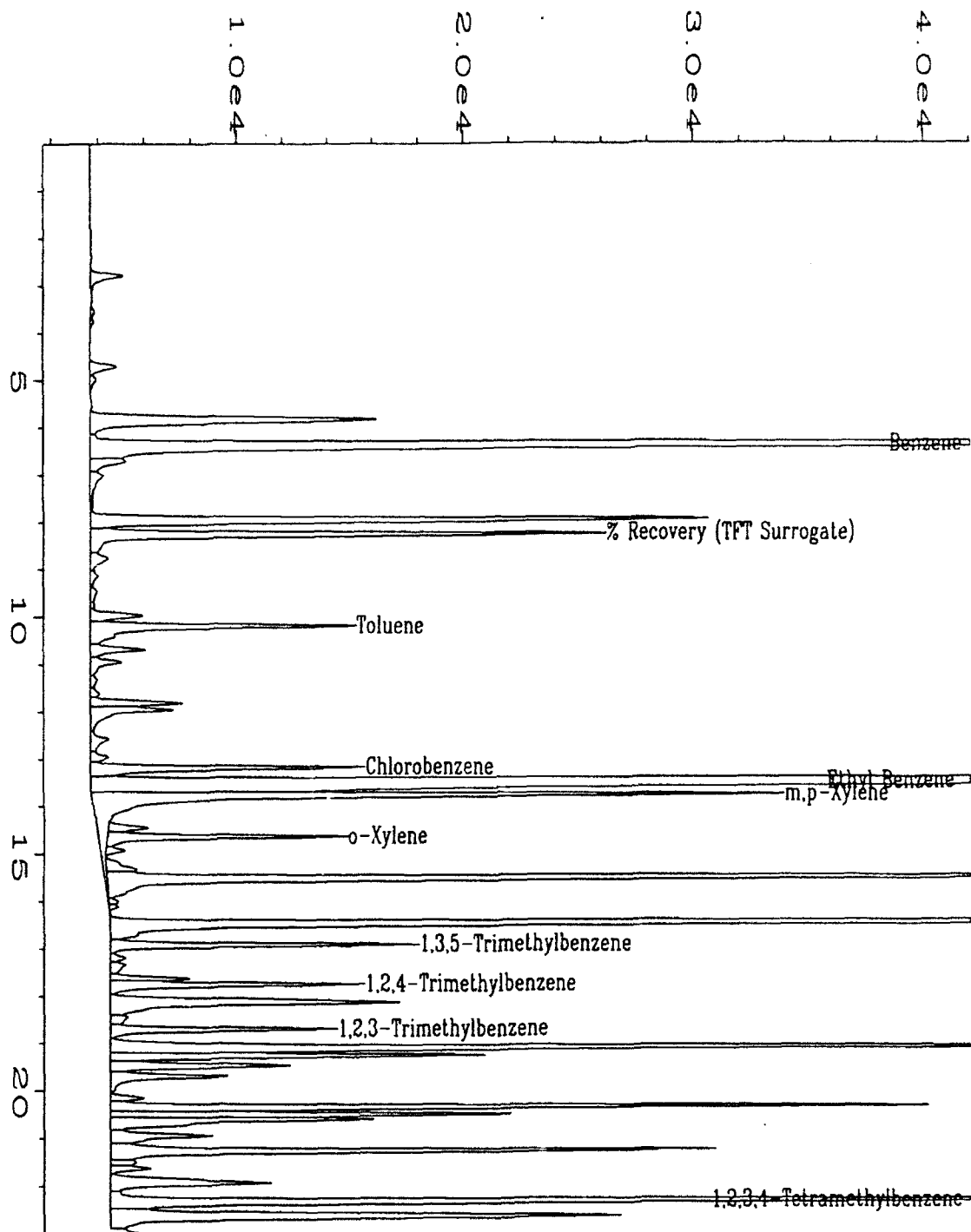
Comments: MSD did not purge properly. The surrogate recovery was 36%. See MS/MSD MD75-MW16 and LCS041495. E = Exceeds the calibration range.

** = Results can not be used due to the high concentration in the sample.

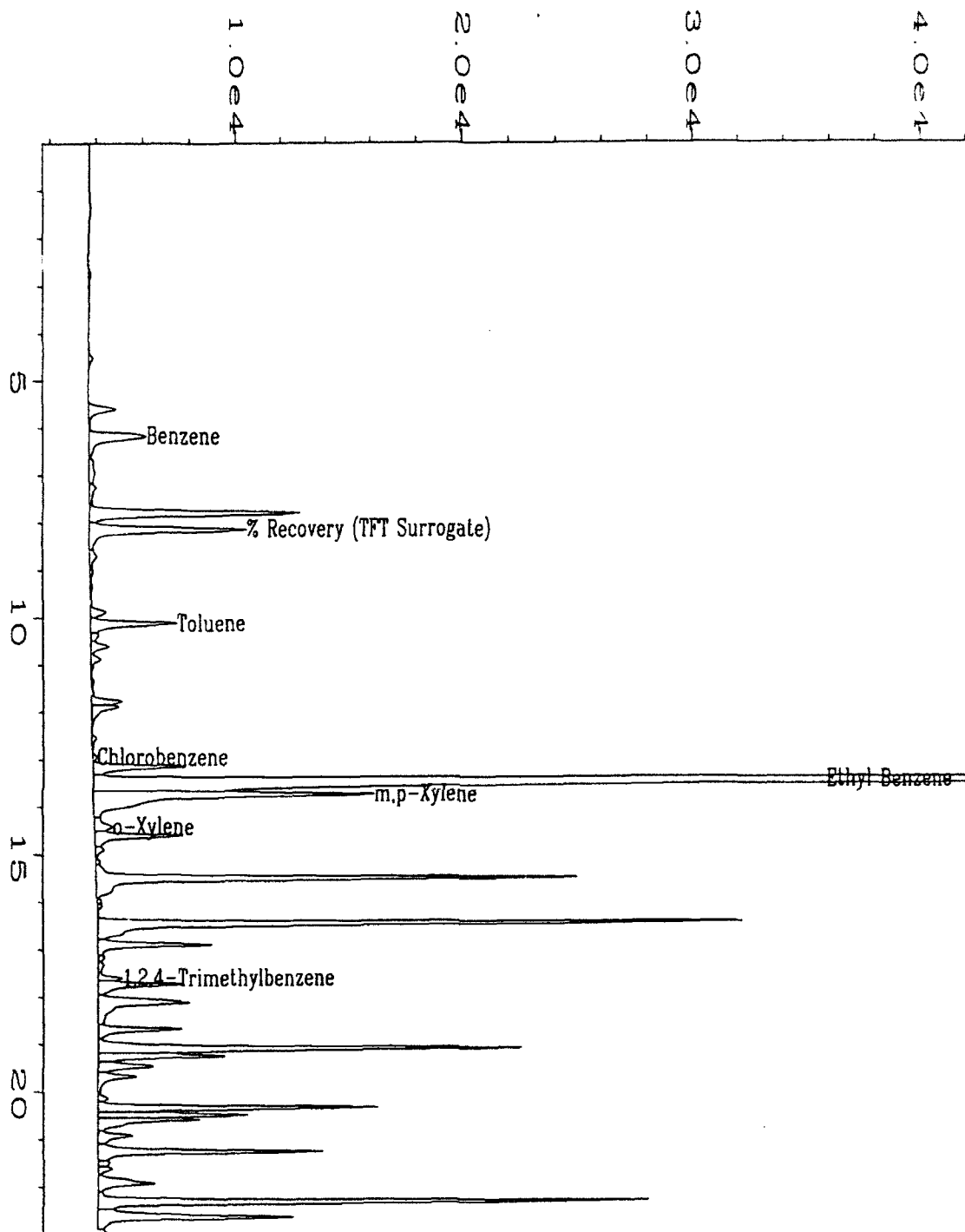
K Cone
Analyst

Am Challen
Approved

MS951063.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10413\043F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 43
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05176MS;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10414.MTH
Acquired on	: 14 Apr 95 03:25 PM	Analysis Method	: BX10414B.MTH
Report Created on:	27 Apr 95 07:26 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD75-MW24 Water		



Data File Name	: C:\HPCHEM\1\DATA\BX10413\044F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 44
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05176MSD;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10414 TH
Acquired on	: 14 Apr 95 04:05 PM	Analysis Method	: BX10414L.MT
Report Created on:	27 Apr 95 07:27 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: MD75-MW24 Water		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MD75-MW24	Client Project No.	: 722450.21020/MAC
Lab Sample No.	: X05176	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	EPA Method No.	: 5030/8015 Mod.
Date Received	: 4/1/95	Matrix	: Water
Date Prepared	: 4/14/95	Method Blank	: MB041495
Date Analyzed	: 4/14/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	3.50	4.62	56%	60-140

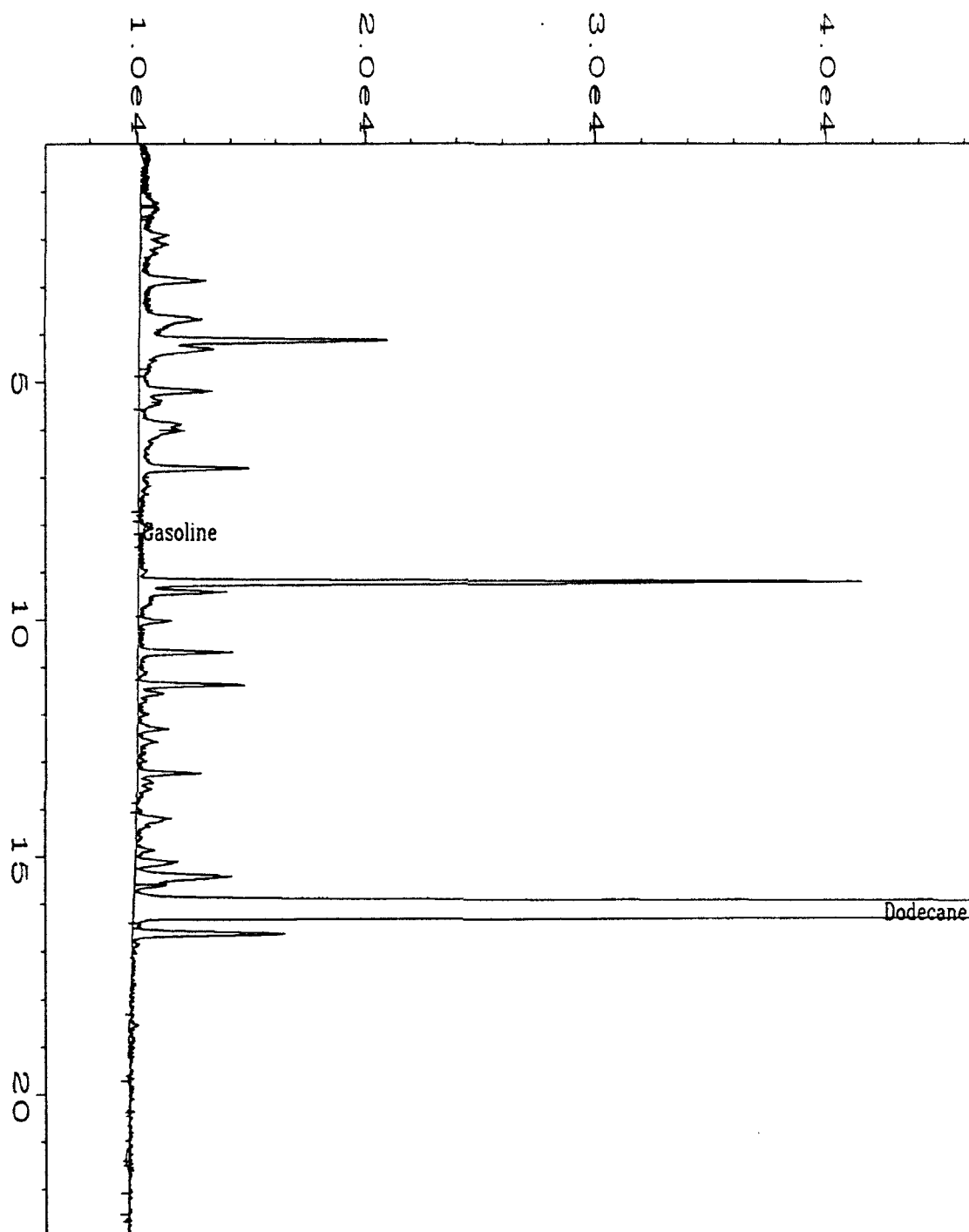
Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MS %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	2.00	5.80	115%	69*	50	60-140

* = Values outside of QC limits.

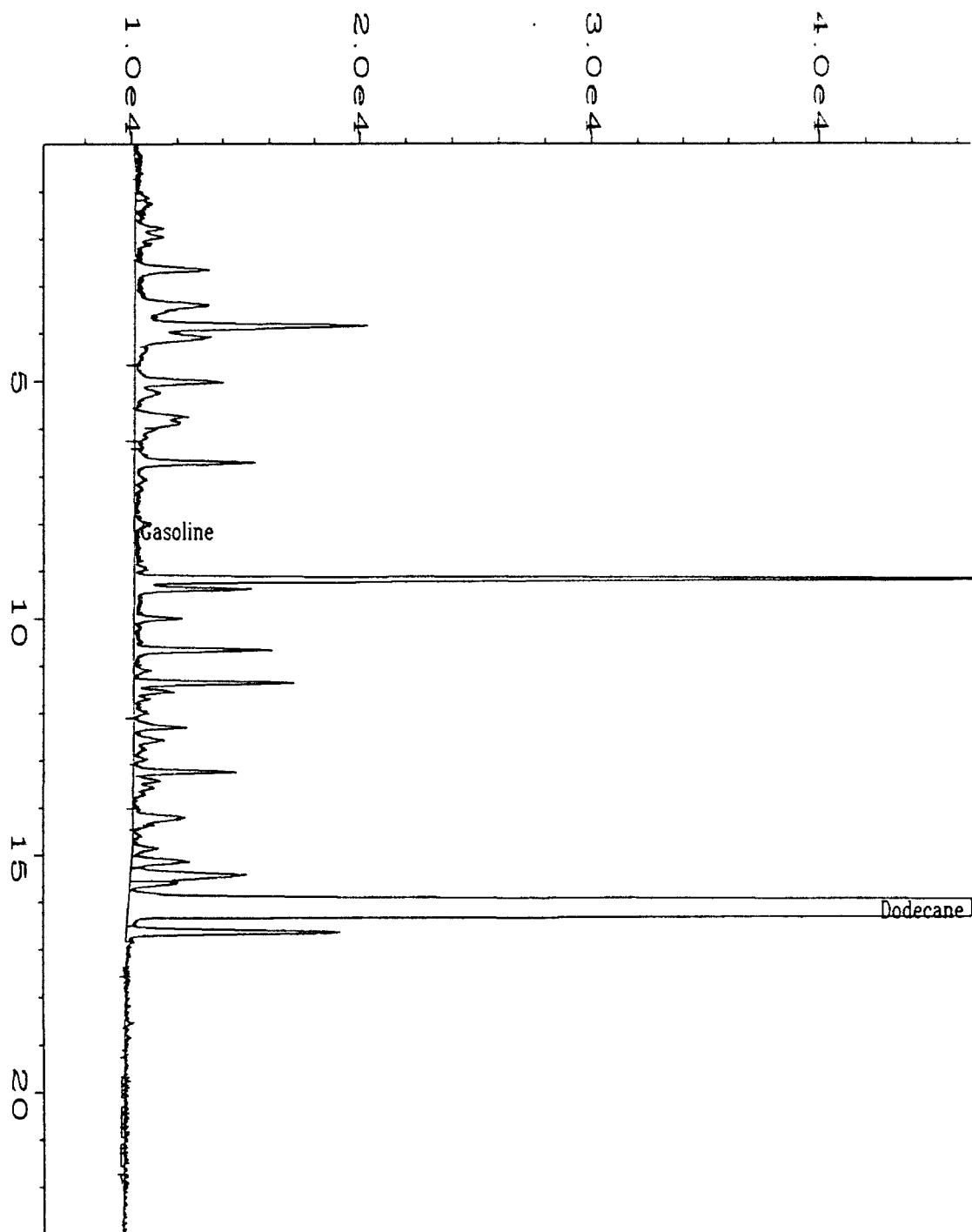
RPD: 1 out of (1) outside limits.

Spike Recovery: 0 out of (2) outside limits.

Comments: NA = Not analyzed/not applicable.



Data File Name	: C:\HPCHEM\1\DATA\tvh0414\022F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 22
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05176 MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA MT
Acquired on	: 14 Apr 95 11:59 PM	Analysis Method	: TVH0415.MT
Report Created on:	16 Apr 95 02:39 PM	Sample Amount	: 0
Last Recalib on	: 16 APR 95 02:01 PM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\1\DATA\tvh0414\023F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 23
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05176 MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 15 Apr 95 00:35 AM	Analysis Method	: TVH0415.MTH
Report Created on	: 16 Apr 95 02:39 PM	Sample Amount	: 0
Last Recalib on	: 16 APR 95 02:01 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: RINSEATE BLANK ✓	Client Project No.	: 722450.21020/Mac E
Lab Sample Number	: X05182	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	Dilution Factor	: 1.00
Date Received	: 4/1/95	Method	: 602
Date Prepared	: 4/14/95	Matrix	: Water
Date Analyzed	: 4/14/95	Lab File No.	: BX1041350
		Method Blank No.	: MB041495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)

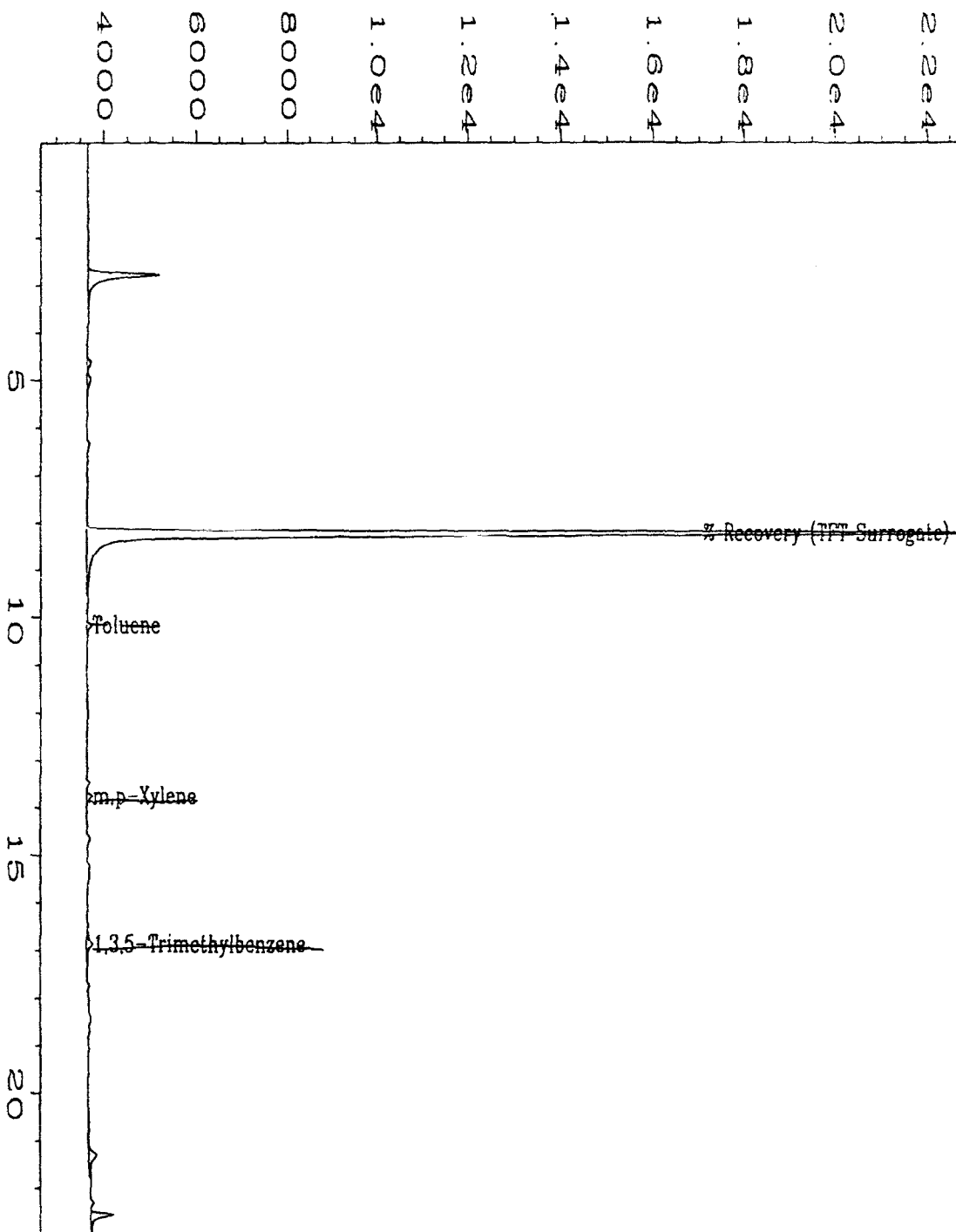
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

A. McClellan
Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10413\050F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 50
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05182;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10414.MTH
Acquired on	: 14 Apr 95 08:02 PM	Analysis Method	: BX10414B.MTH
Report Created on:	27 Apr 95 08:03 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: RINSEATE BLANK Water		

pm 4/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: FIELD BLANK /	Client Project No.	: 722450.21020/Mac C
Lab Sample Number	: X05181	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	Dilution Factor	: 1.00
Date Received	: 4/1/95	Method	: 602
Date Prepared	: 4/14/95	Matrix	: Water
Date Analyzed	: 4/14/95	Lab File No.	: BX1041348
		Method Blank No.	: MB041495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		92%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

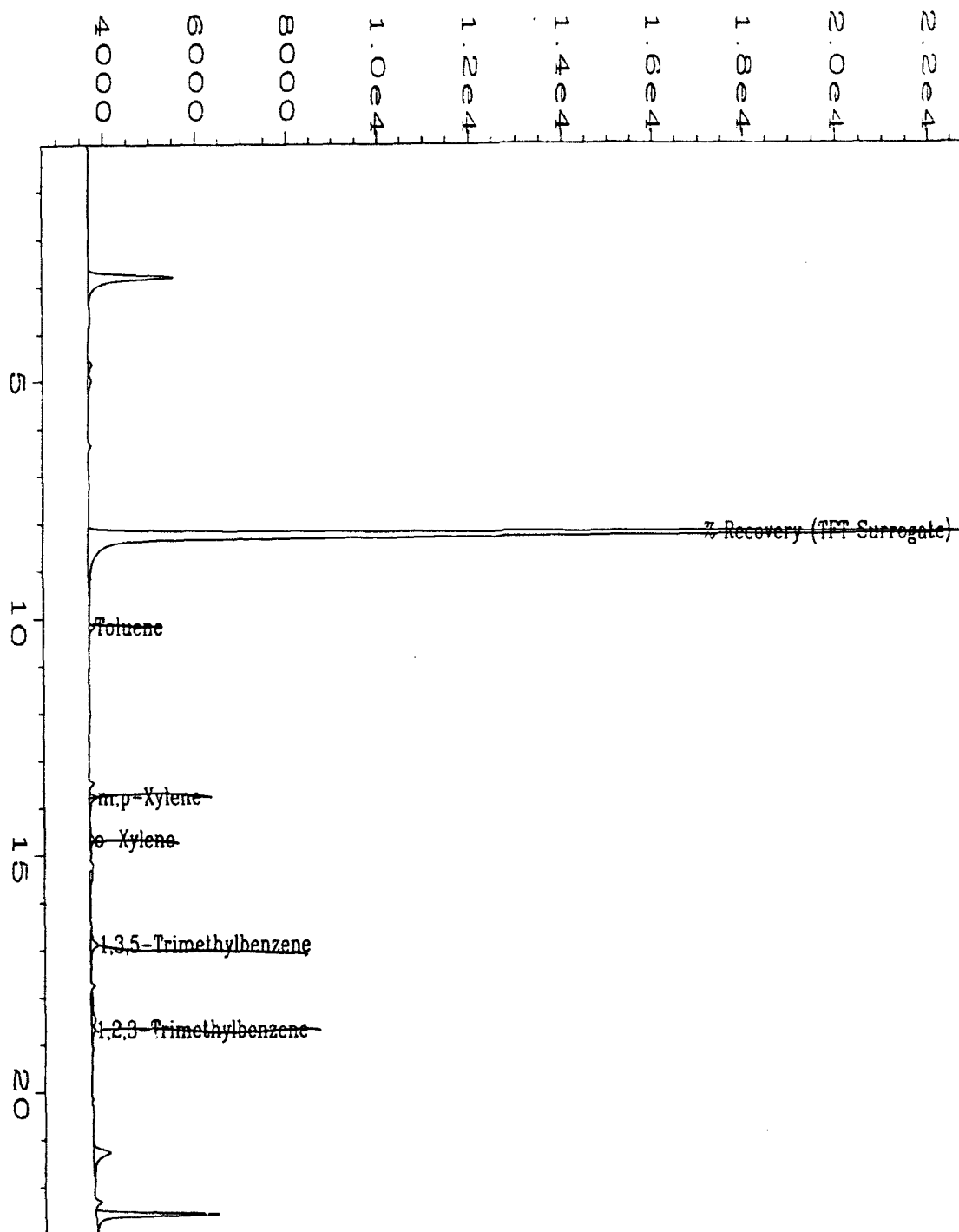
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McClellan
Approved

BTEX1063.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10413\048F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 48
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05181;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10414.MTH
Acquired on	: 14 Apr 95 06:43 PM	Analysis Method	: BX10414B.MTH
Report Created on:	27 Apr 95 08:27 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1	Sample Info	: Project#: 95-1063 Client#: FIELD BLANK Water

pm 4/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

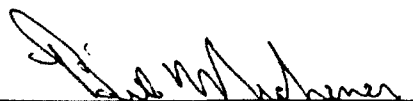
Client Sample Number	: Trip Blank	Client Project No.	: 722450.21020/Mac C
Lab Sample Number	: X05170	Lab Project No.	: 95-1063
Date Sampled	: 3/31/95	Dilution Factor	: 1.00
Date Received	: 4/1/95	Method	: 602
Date Prepared	: 4/13/95	Matrix	: Water
Date Analyzed	: 4/14/95	Lab File No.	: BX1041322
		Method Blank No.	: MB041395

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		77%	70%-130% (QC limits)

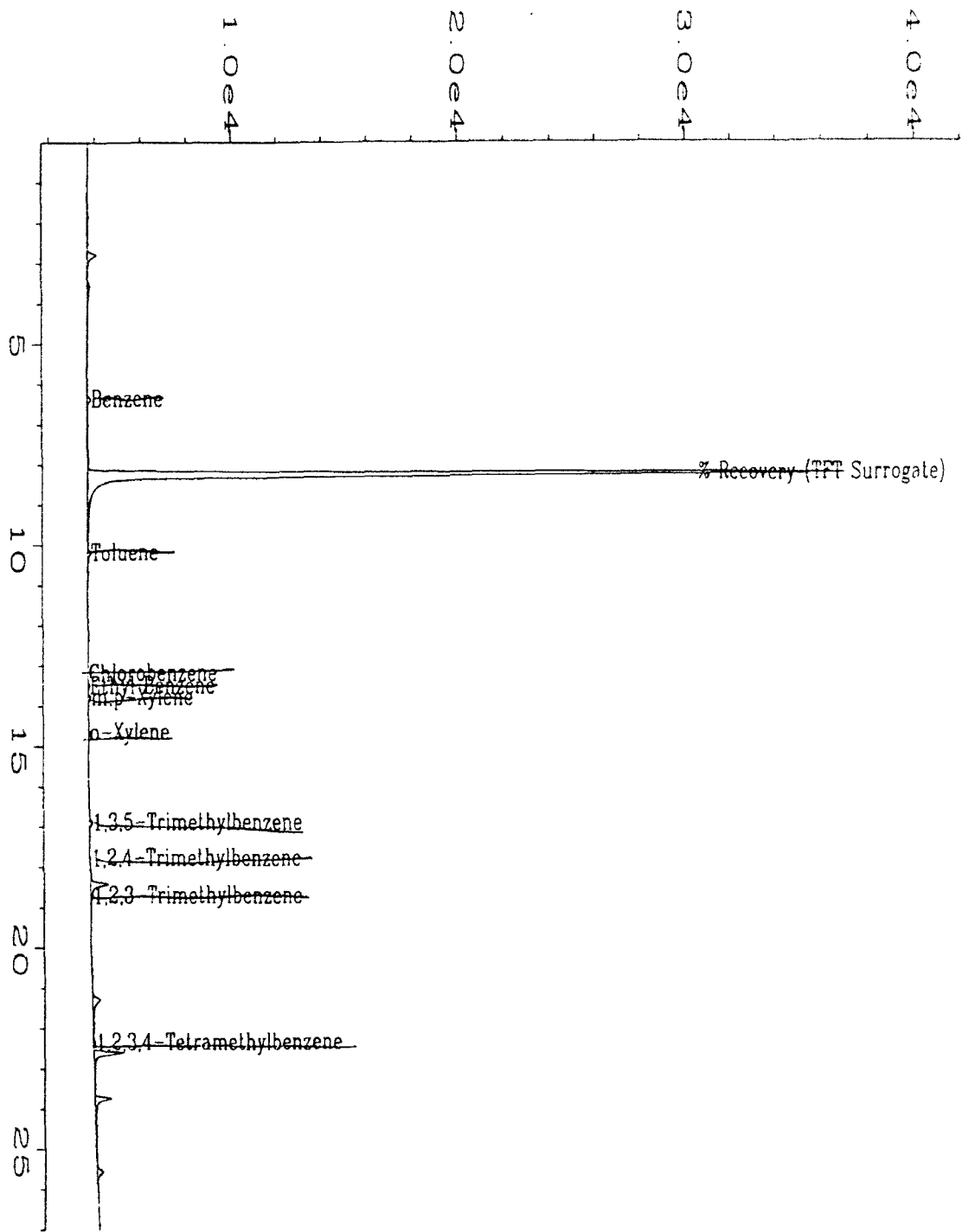
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10413\022F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 22
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05170;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10413A.MTH
quired on	: 14 Apr 95 01:32 AM	Analysis Method	: BX10413A.MTH
port Created on:	14 Apr 95 01:59 AM	Sample Amount	: 0
Last Recalib on	: 13 APR 95 04:13 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project#: 95-1063 Client#: TRIP BLANK Water		

pm 4/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB041395
Date Prepared : 4/13/95
Date Analyzed : 4/13/95

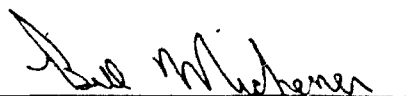
Client Project No. : 722450.21020/Mac E
Lab Project No. : 95-1063
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : NV-F0101.D


Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)

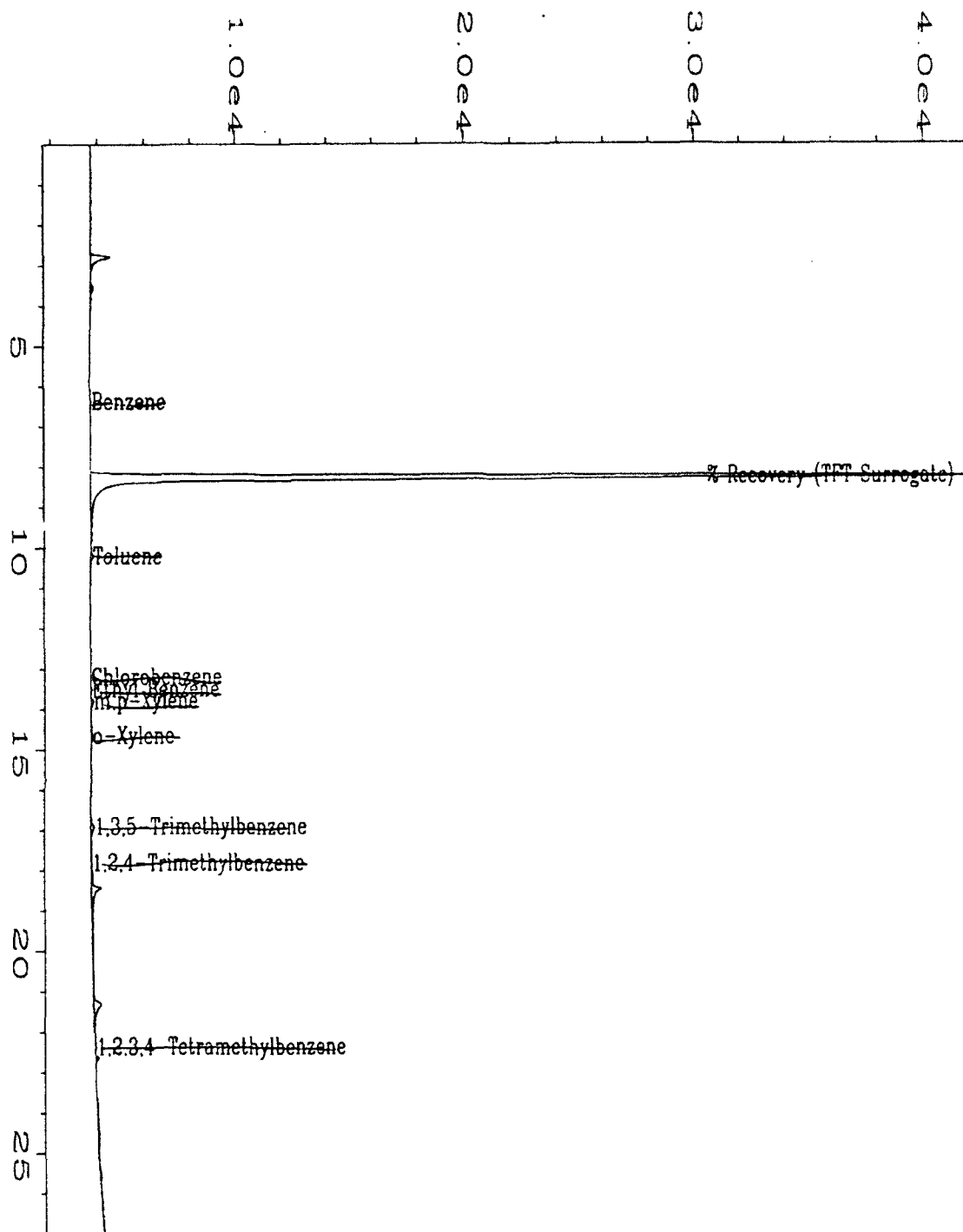
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : C:\HPCHEM\1\DATA\NV-F0101.D
 Operator :
 Instrument : BTEX1
 Sample Name : MB041395 *87m*
 Run Time Bar Code:
 quired on : 13 Apr 95 04:58 PM
 Report Created on: 20 Apr 95 01:04 PM
 Last Recalib on : 13 APR 95 04:13 PM
 Multiplier : 1

Page Number : 1
 Vial Number :
 Injection Number :
 Sequence Line :
 Instrument Method: BX10413A.MTH
 Analysis Method : BX10413A.MTH
 Sample Amount : 0
 ISTD Amount :

pm 4/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB041495	Client Project No.	: 722450.21020/Mac Di
Date Prepared	: 4/14/95	Lab Project No.	: 95-1063
Date Analyzed	: 4/14/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1041340

Compound Name	Gas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		99%	70%-130% (QC limits)

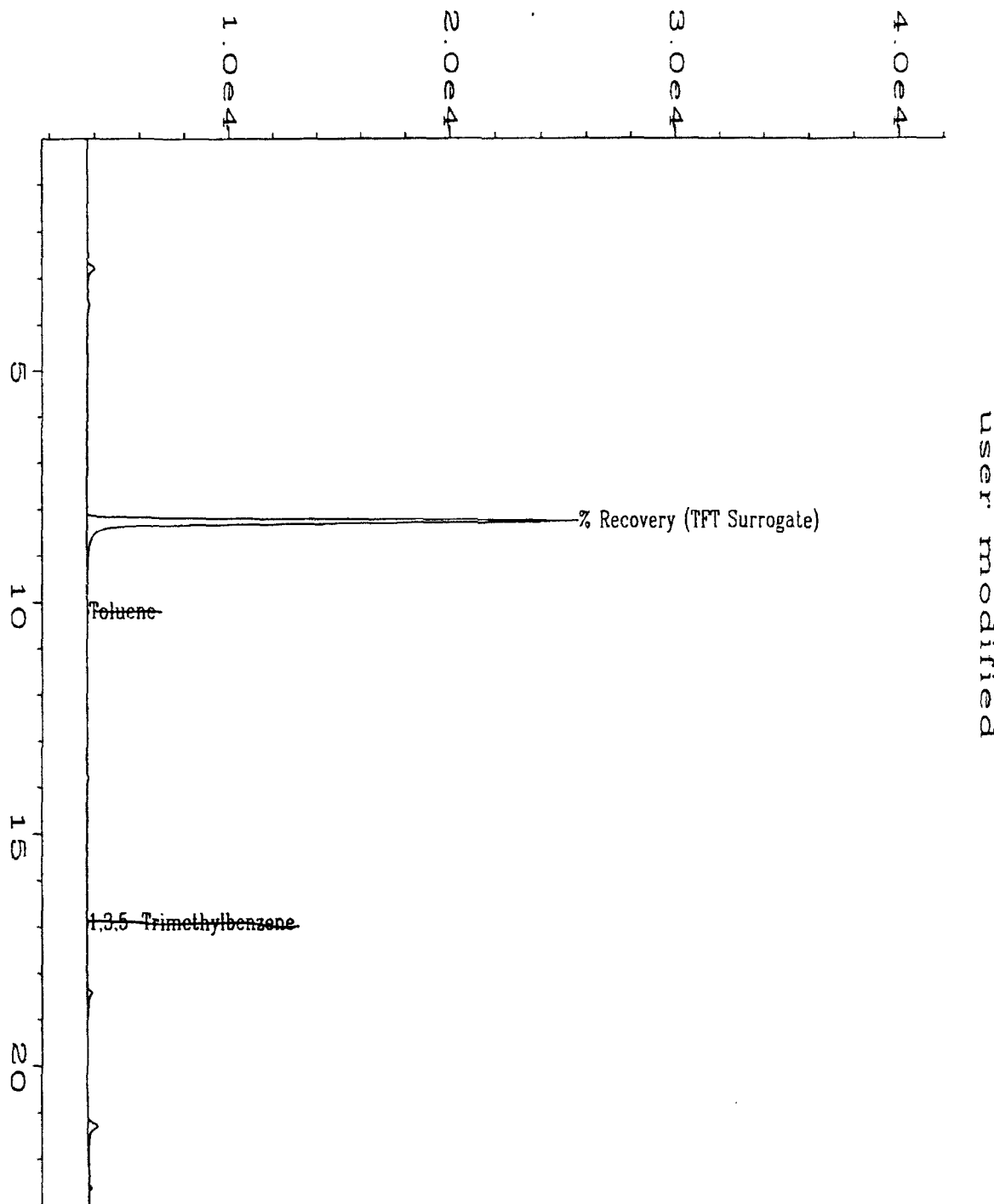
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10413\040F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 40
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: MB041495	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10414.MTH
quired on	: 14 Apr 95 01:24 PM	Analysis Method	: BX10414B.MTH
Report Created on:	: 27 Apr 95 07:31 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 1		

pm 4/28/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS041395 Dilution Factor : 1.00
Date Extracted/Prepared : 4/13/95 Method : 602
Date Analyzed : 4/13/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX1041308

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.3	81.5	71.0-119.0*
Toluene	108-88-3	17.0	85.0	73.0-111.0*
Chlorobenzene	108-90-7	17.3	86.5	64.0-119.0*
Ethyl Benzene	100-41-4	17.3	86.5	75.0-114.0*
m,p-Xylene	108-38-3 106-42-3	17.1	85.5	75.0-114.0*
o-Xylene	95-47-6	16.9	84.5	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	17.8	89.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.4	92.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	21.3	106.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	17.8	89.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		91%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

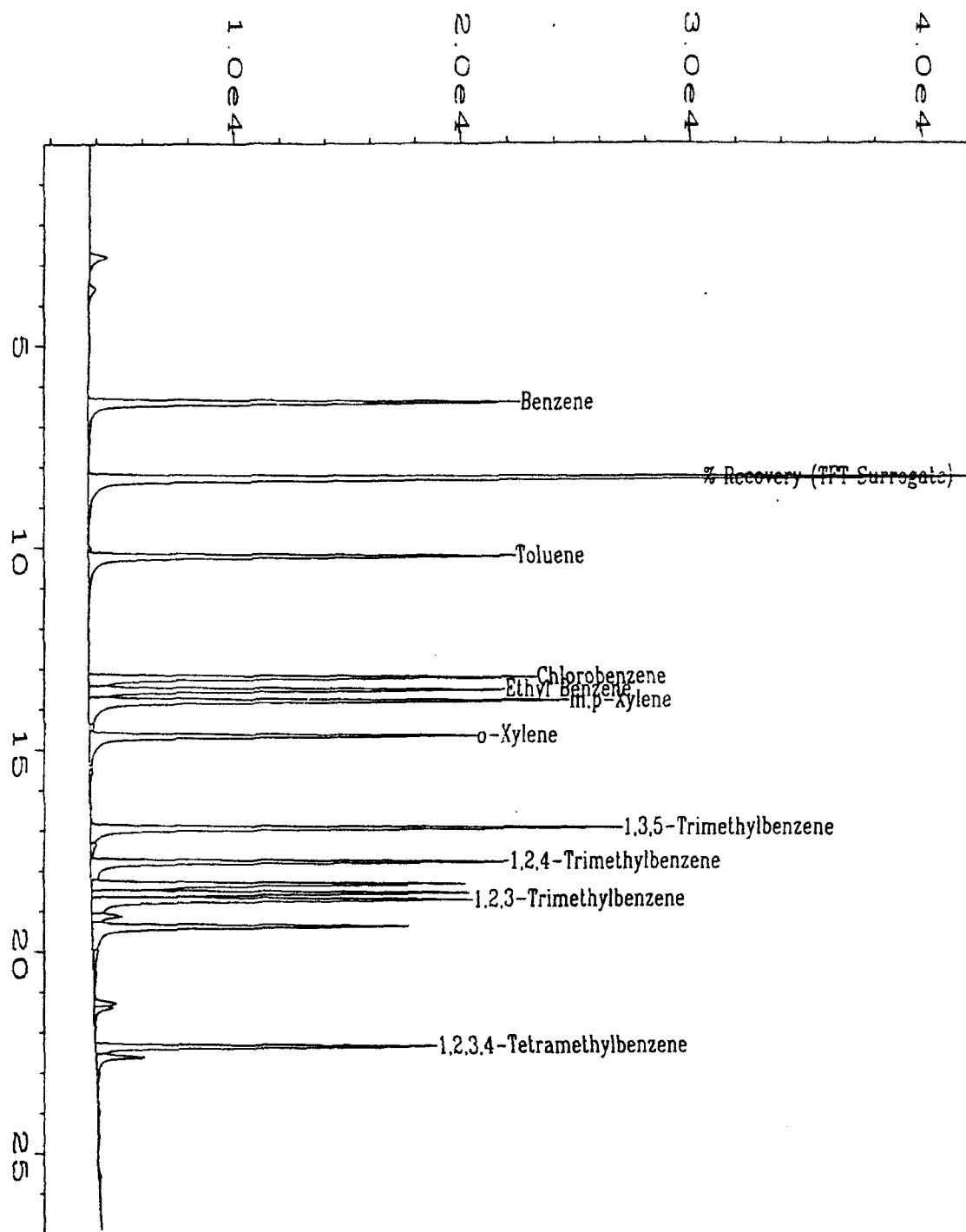
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

A. McClellan
Approved



ata File Name	: C:\HPCHEM\1\DATA\BX10413\008F0801.D	Page Number	: 1
perator	: C.J. Cook	Vial Number	: 8
nstrument	: BTEX1	Injection Number	: 1
ample Name	: LCS041395	Sequence Line	: 8
un Time Bar Code:		Instrument Method:	BX10413.MTH
quired on	: 13 Apr 95 04:19 PM	Analysis Method	: BX10413A.MTH
st Created on:	13 Apr 95 05:01 PM	Sample Amount	: 0
ase Recalib on	: 13 APR 95 04:13 PM	ISTD Amount	:
ltiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS041495 Dilution Factor : 1.00
Date Extracted/Prepared : 4/14/95 Method : 602
Date Analyzed : 4/14/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX1041339

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	15.8	79.0	71.0-119.0*
Toluene	108-88-3	16.3	81.5	73.0-111.0*
Chlorobenzene	108-90-7	16.1	80.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.3	81.5	75.0-114.0*
m,p-Xylene	108-38-3 106-42-3	17.6	88.0	75.0-114.0*
o-Xylene	95-47-6	15.7	78.5	64.0-111.0*
1,3,5-Trimethylbenzene	108-67-8	16.5	82.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	16.8	84.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.5	97.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	15.0	75.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		104%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

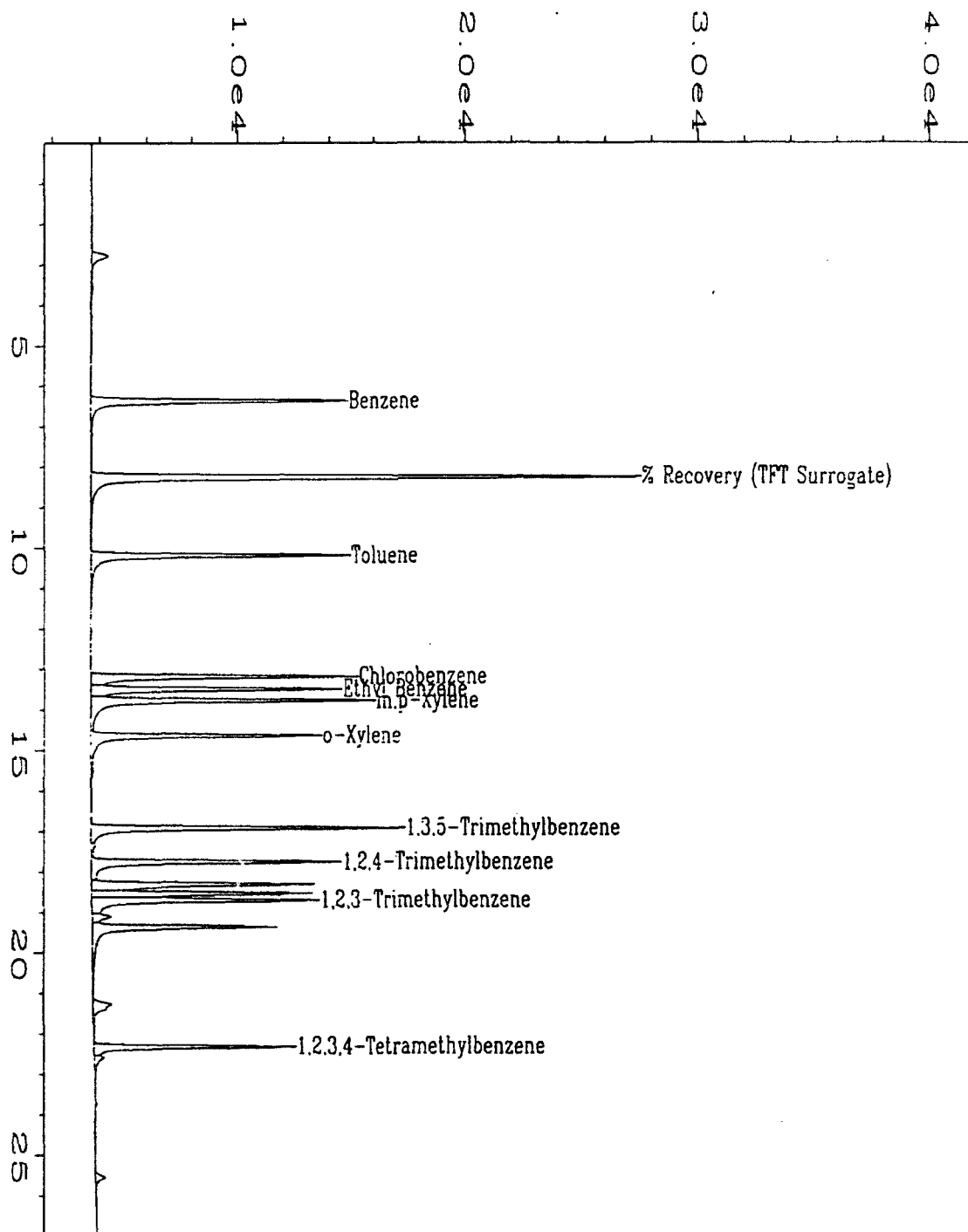
NA = Not available/Not analyzed.

Analyst

K. Cone

Approved

A. McCall



Data File Name : C:\HPCHEM\1\DATA\BX10413\039F0101.D

Operator : C.J. Cook

Instrument : BTEX1

Sample Name : LCS041495

Run Time Bar Code:

Acquired on : 14 Apr 95 12:45 PM

Report Created on: 15 Apr 95 02:05 PM

Last Recalib on : 15 APR 95 01:55 PM

Multiplier : 1

Page Number : 1

Vial Number : 39

Injection Number : 1

Sequence Line : 1

Instrument Method: BX10413A.MTH

Analysis Method : BX10414A.MTH

Sample Amount : 0

ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH)
Laboratory Control Sample (LCS)

LCS Number : LCS041495 Matrix : WATER
Date Prepared : 4/14/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/14/95
Sequence Number : TVH7

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	4.93	99%	70%-130%

QUALIFIERS

U = TVH analyzed for but not detected.

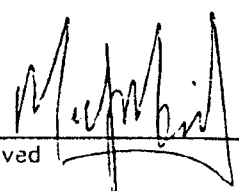
B = TVH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

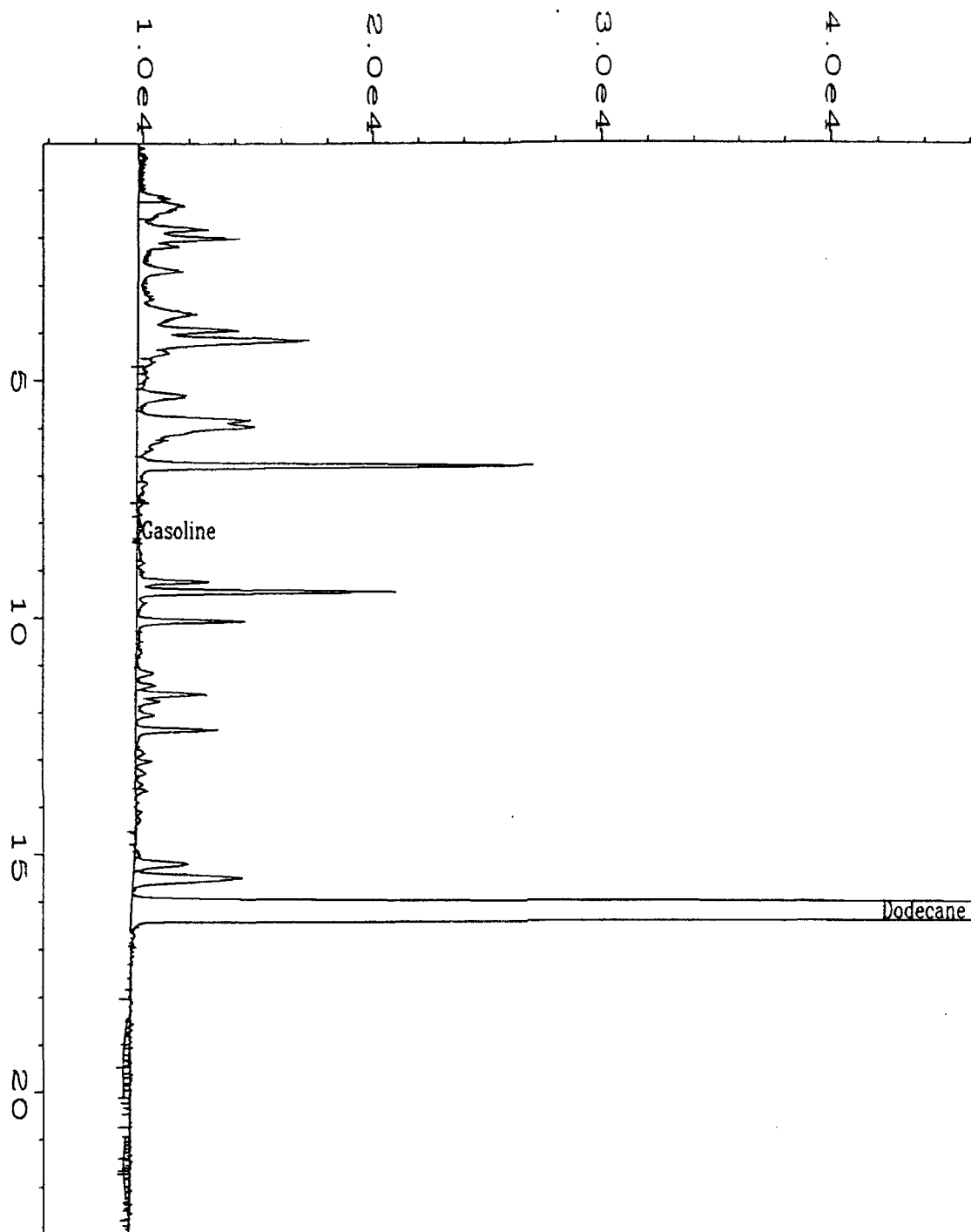
NA = Not Available.



Analyst



Approved



Data File Name	: C:\HPCHEM\1\DATA\tvh0414\007F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 7
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS041495	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Acquired on	: 14 Apr 95 02:59 PM	Analysis Method	: TVH0415.MTH
Report Created on:	16 Apr 95 02:37 PM	Sample Amount	: 0
Last Recalib on	: 16 APR 95 02:01 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH, as JET FUEL)

Date Sampled : 3/31/95 Client Project Number : 722450-21020
Date Received : 4/1/95 Lab Project Number : 95-1063
Date Prepared : 4/3/95 Matrix : Water
Date Analyzed : 4/4,5,6/95 Method Number : 3500/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH mg/L	RL mg/L
WB040395	WATER BLANK	75%	U	0.5
X05169	MD75-MW12	94%	3.1	0.5
X05172	MD75-MW8	110%	14	0.5
X05175	MD75-MW4	77%	15	0.5
X05178	24MP-2S	47%	4.0	0.5
X05178-R	24MP-2S	47%	3.9	0.5
X05179	MD24-MW6	61%	1.4	0.5
X05179-R	MD24-MW6	61%	1.3	0.5
X05183	MD24-MW2	45%	U	0.5
X05183-R	MD24-MW2	43%	U	0.5
X05184	MD24-MW26	53%	1.2	0.5
X05184-R	MD24-MW26	58%	1.4	0.5
X05185	MS/MSD	46%	U	0.5
X05185-R	MS/MSD	44%	U	0.5

QUALIFIERS

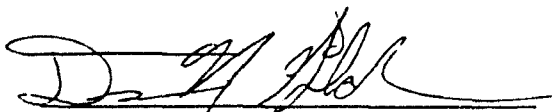
U = TEH analyzed for but not detected.

B = TEH found in blank.

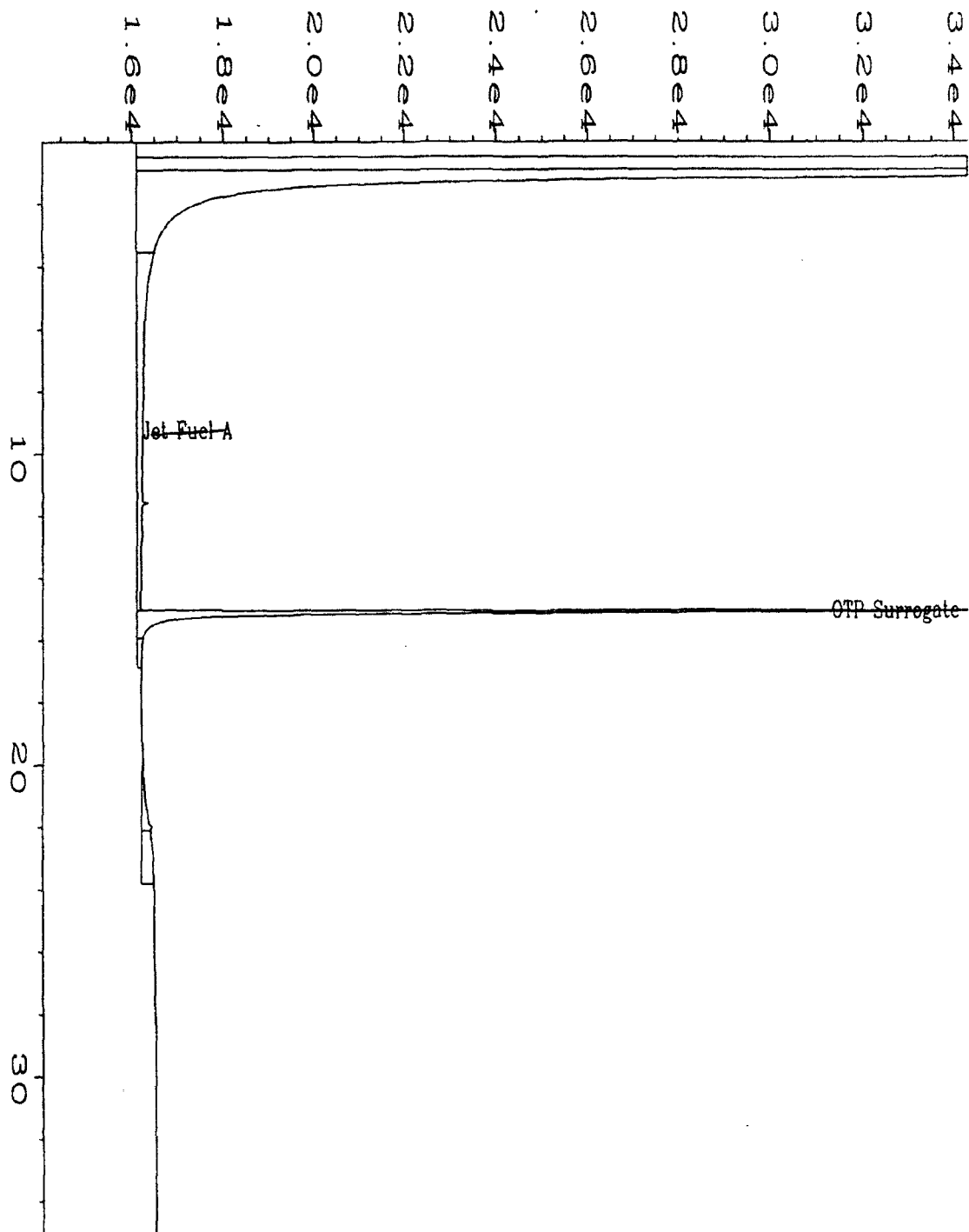
E = Extrapolated value.

RL = Reporting Limit

R = Reanalysis of original sample extract.

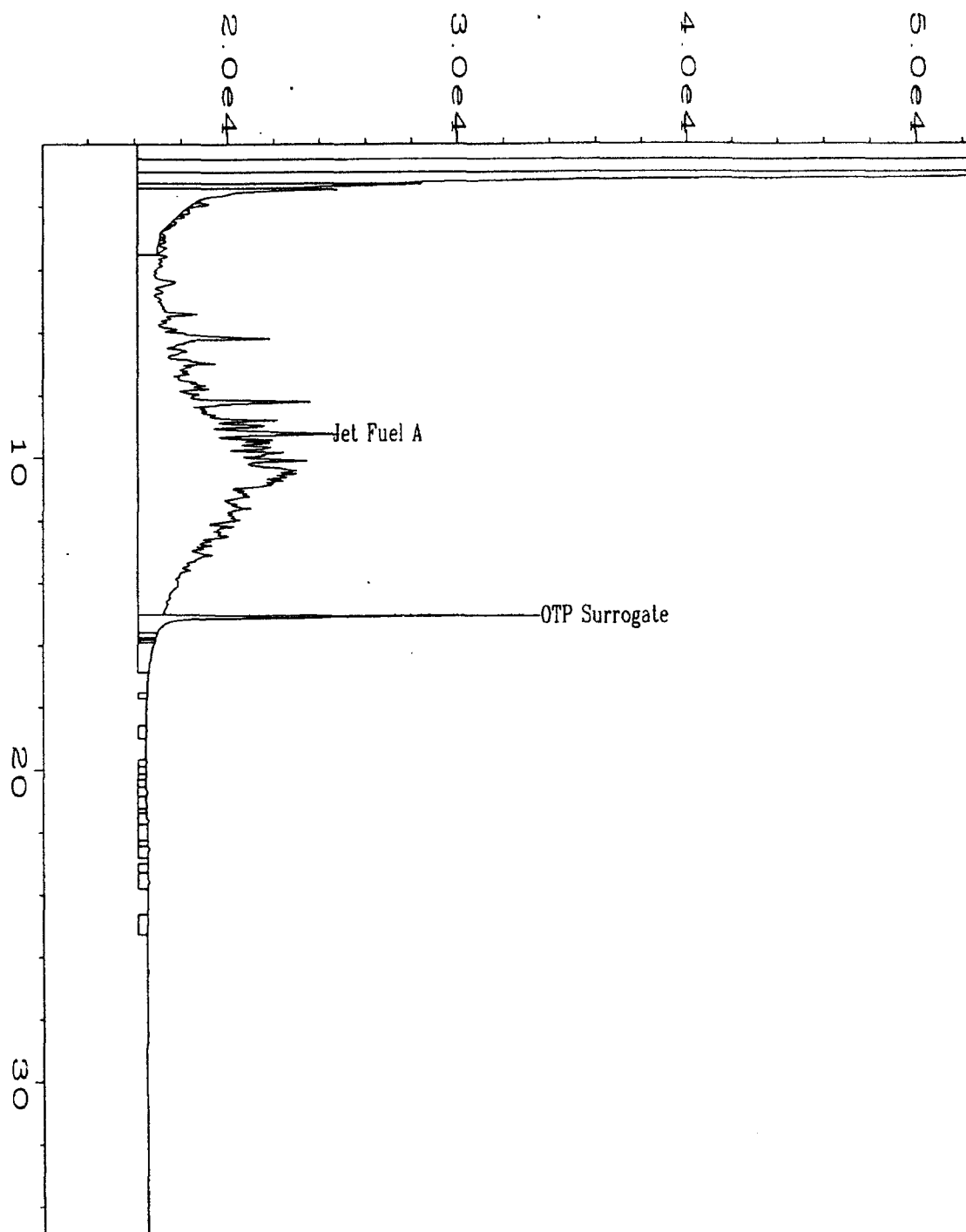

Analyst


Approved

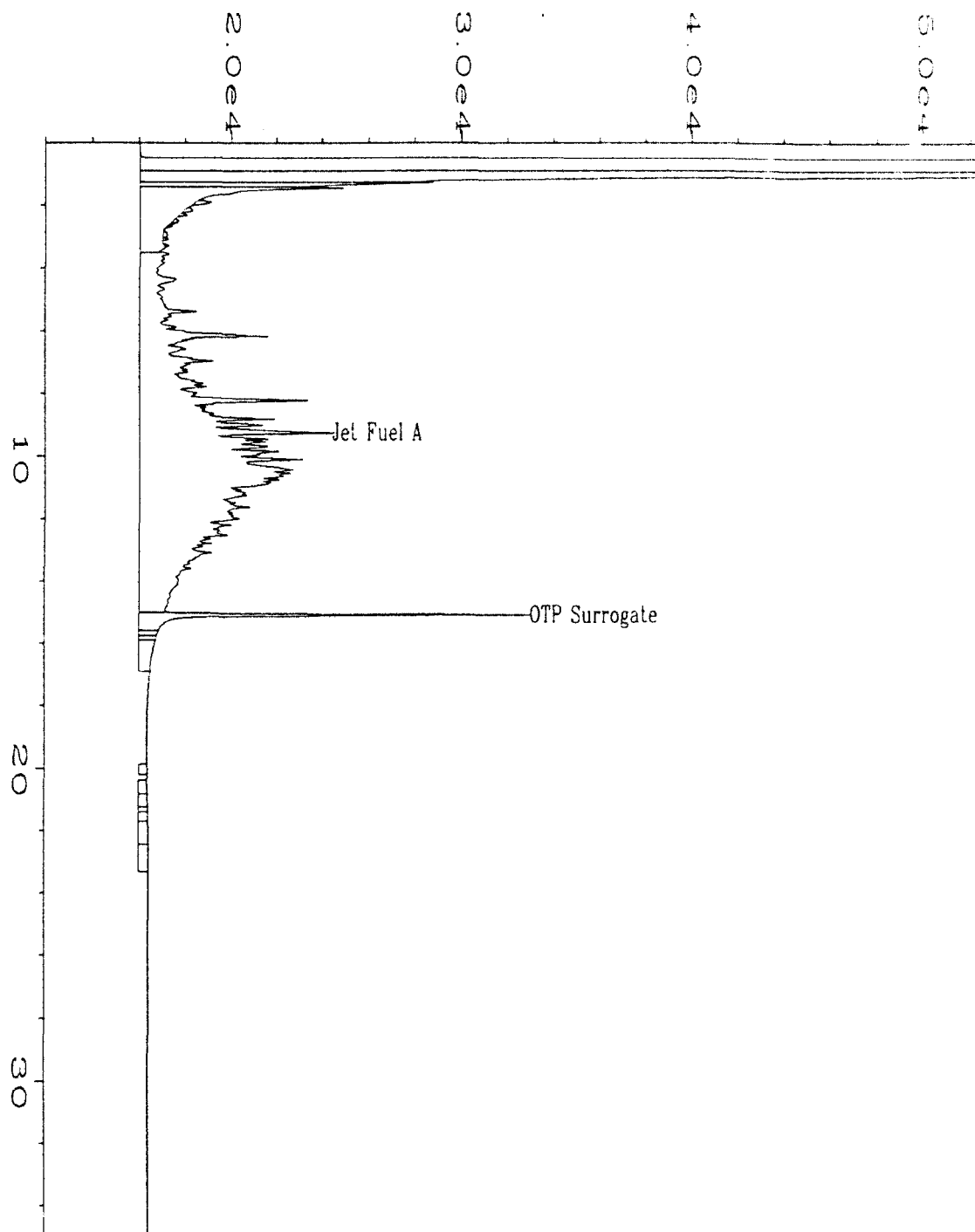


Data File Name	: C:\HPCHEM\2\DATA\JET0404\009R0801.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TEH	Injection Number	: 1
Sample Name	: WB040395	Sequence Line	: 8
in Time Bar Code:		Instrument Method	: JET0404.MTH
Acquired on	: 04 Apr 95 06:13 PM	Analysis Method	: JET0404.MTH
Report Created on:	05 Apr 95 01:33 PM	Sample Amount	: 0
Last Recalib on	: 05 APR 95 10:34 AM	ISTD Amount	:
Multiplier	: 1		

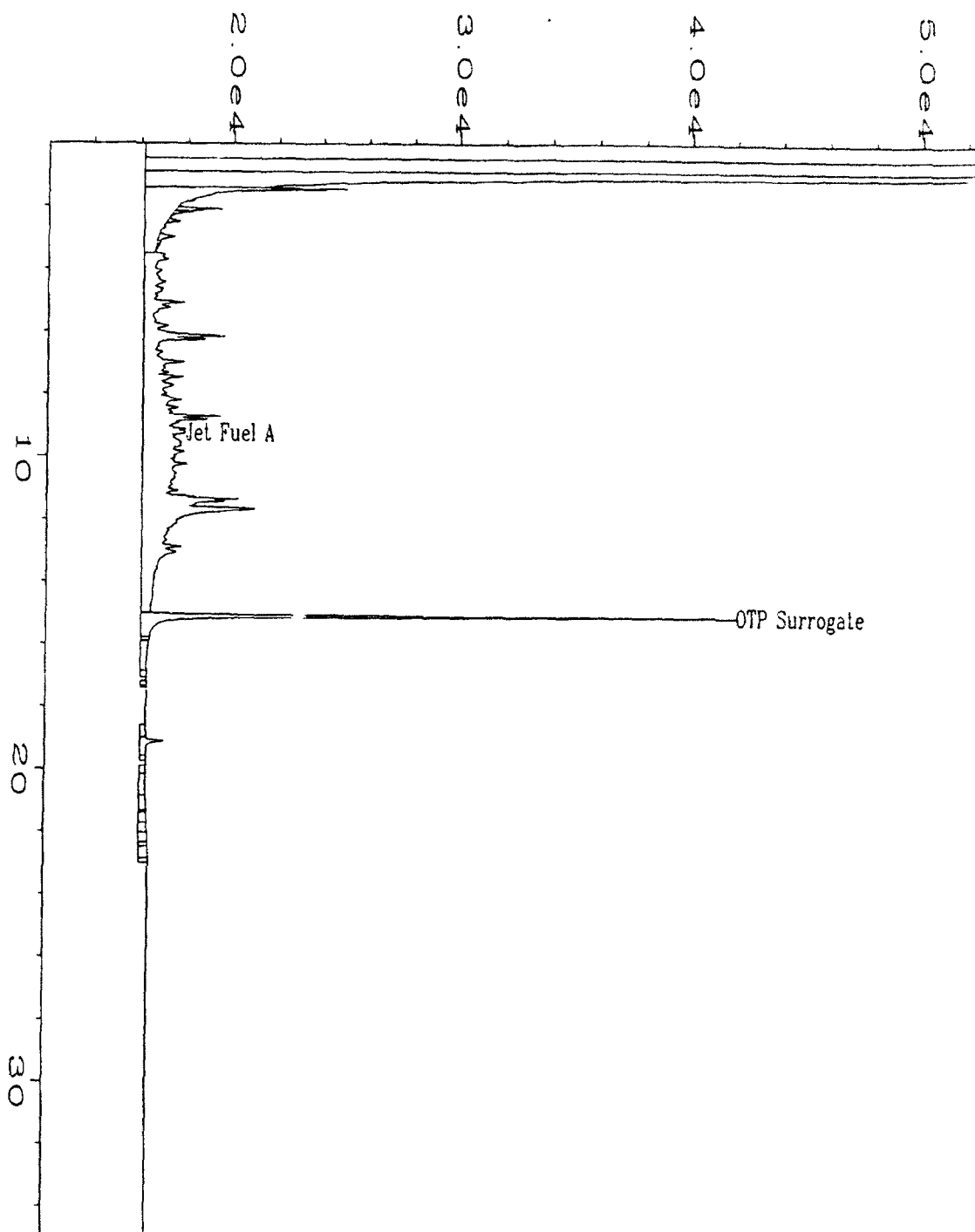
... 4/22/95



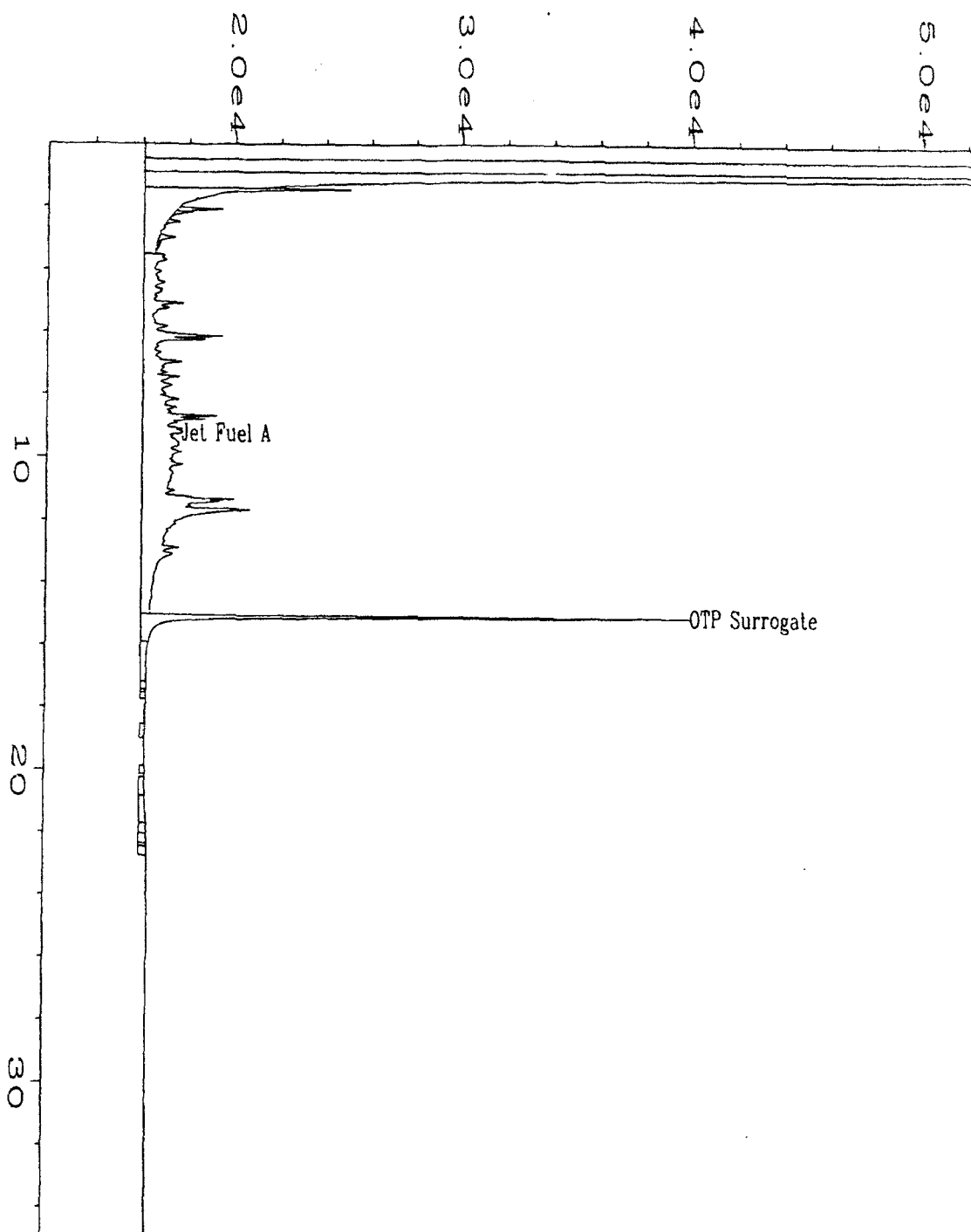
Data File Name	: C:\HPCHEM\2\DATA\jet0405\017R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 17
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05178 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BA.M
Acquired on	: 06 Apr 95 00:11 AM	Analysis Method	: JET0405.MT
Report Created on:	: 14 Apr 95 12:27 PM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT #24MP-25 WATER		



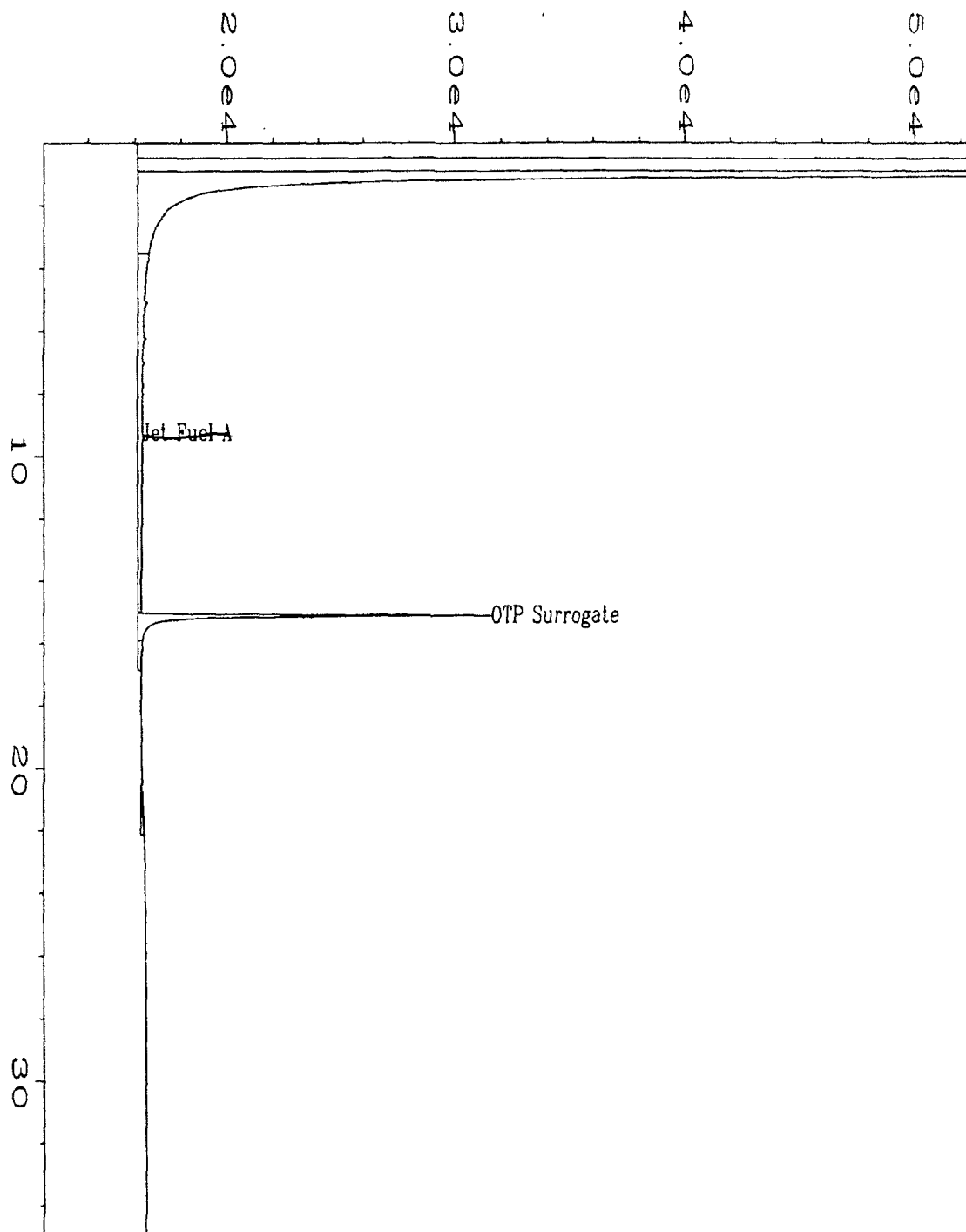
Data File Name	: C:\HPCHEM\2\DATA\jet0405\026R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 26
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05178 DF=1 -R	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
quired on	: 06 Apr 95 12:52 PM	Analysis Method	: JET0405.MTH
Report Created on:	: 07 Apr 95 10:19 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT #24MP-25 WATER		



Data File Name	: C:\HPCHEM\2\DATA\jet0405\018R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 18
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05179 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1B.M
Acquired on	: 06 Apr 95 01:01 AM	Analysis Method	: JET0405.M
Report Created on:	14 Apr 95 12:27 PM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT # MD24-MW6 WATER		

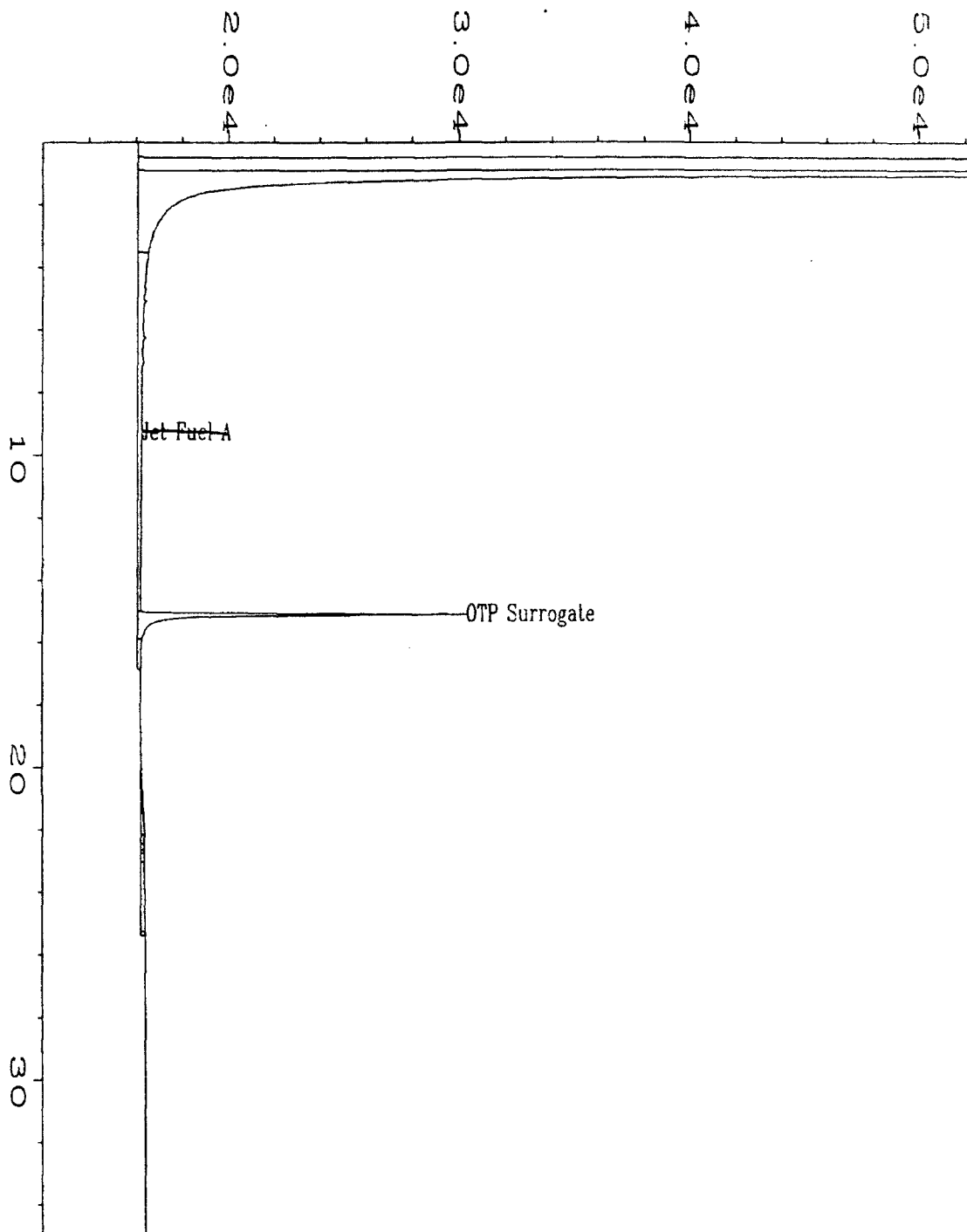


Data File Name	: C:\HPCHEM\2\DATA\jet0405\027R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 27
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05179 DF=1 -R	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 06 Apr 95 01:42 PM	Analysis Method	: JET0405.MTH
Report Created on	: 07 Apr 95 10:19 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT # MD24-MW6 WATER		



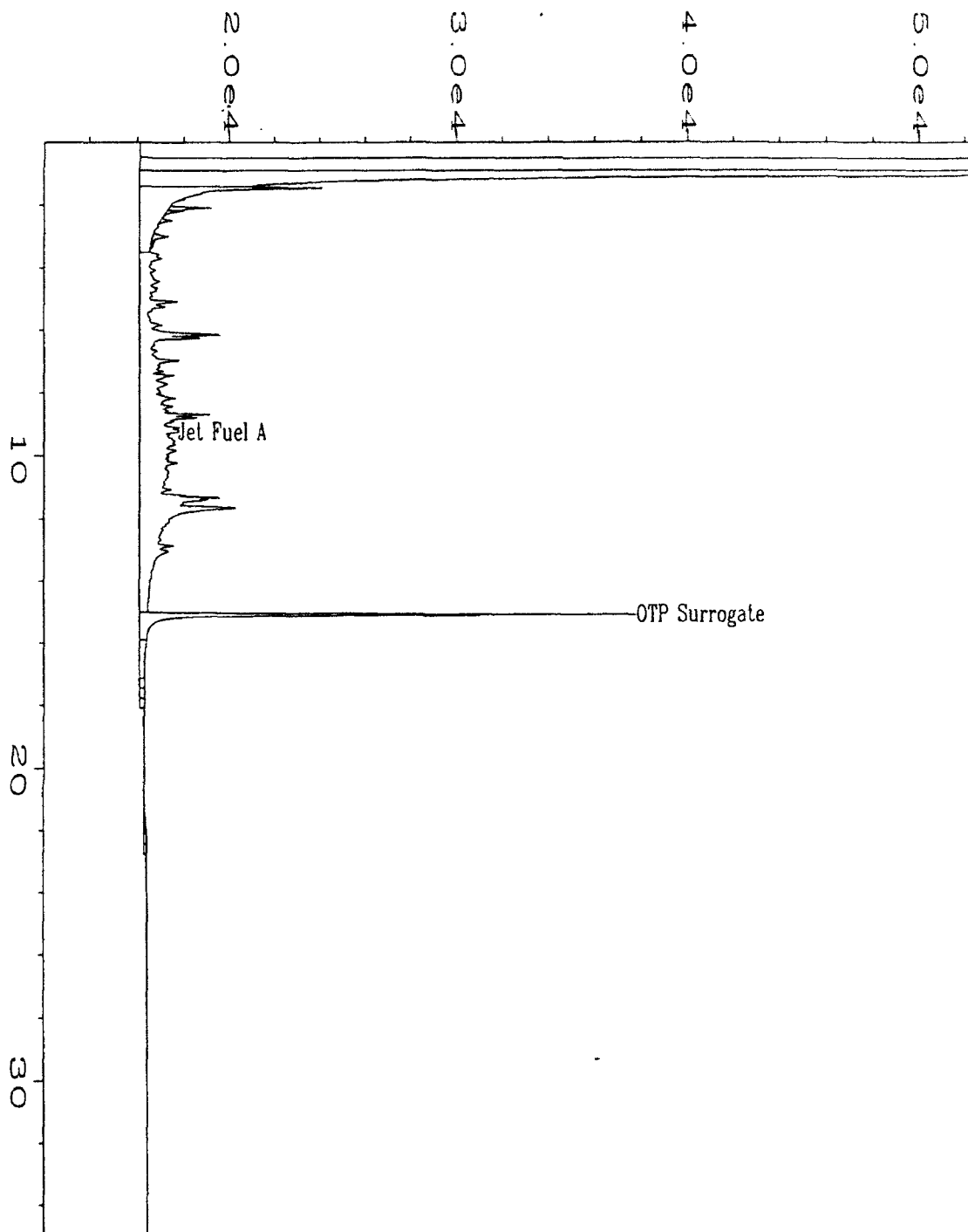
Data File Name	: C:\HPCHEM\2\DATA\jet0405\019R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 19
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05183 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1B .M
Acquired on	: 06 Apr 95 01:51 AM	Analysis Method	: JET0405.M
Report Created on:	14 Apr 95 12:27 PM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT # MD24-MW2 WATER		

pm 4/22/95

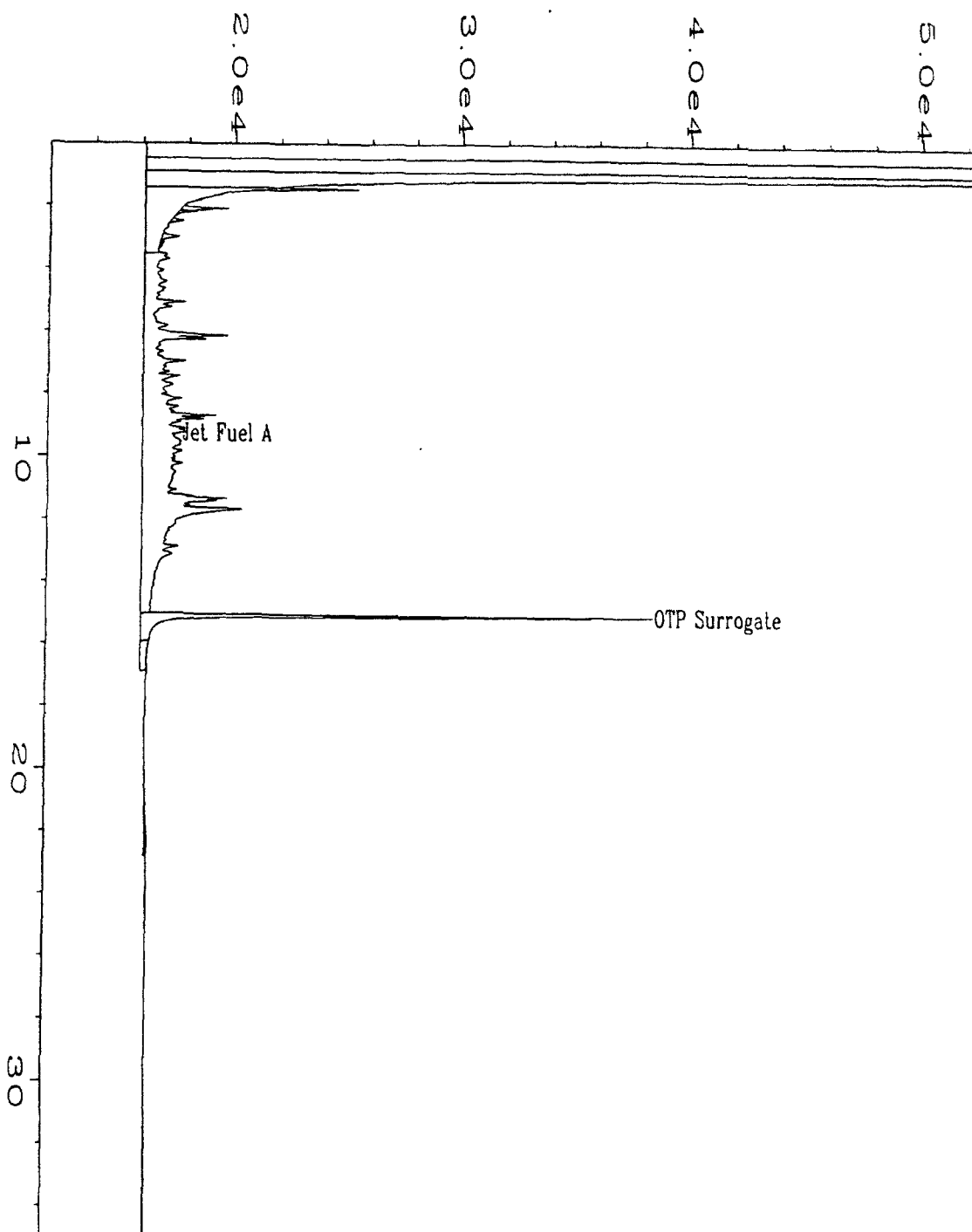


Data File Name	: C:\HPCHEM\2\DATA\jet0405\028R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 28
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05183 DF=1 <i>R</i>	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 06 Apr 95 02:32 PM	Analysis Method	: JET0405.MTH
Report Created on:	07 Apr 95 10:19 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT # MD24-MW2 WATER		

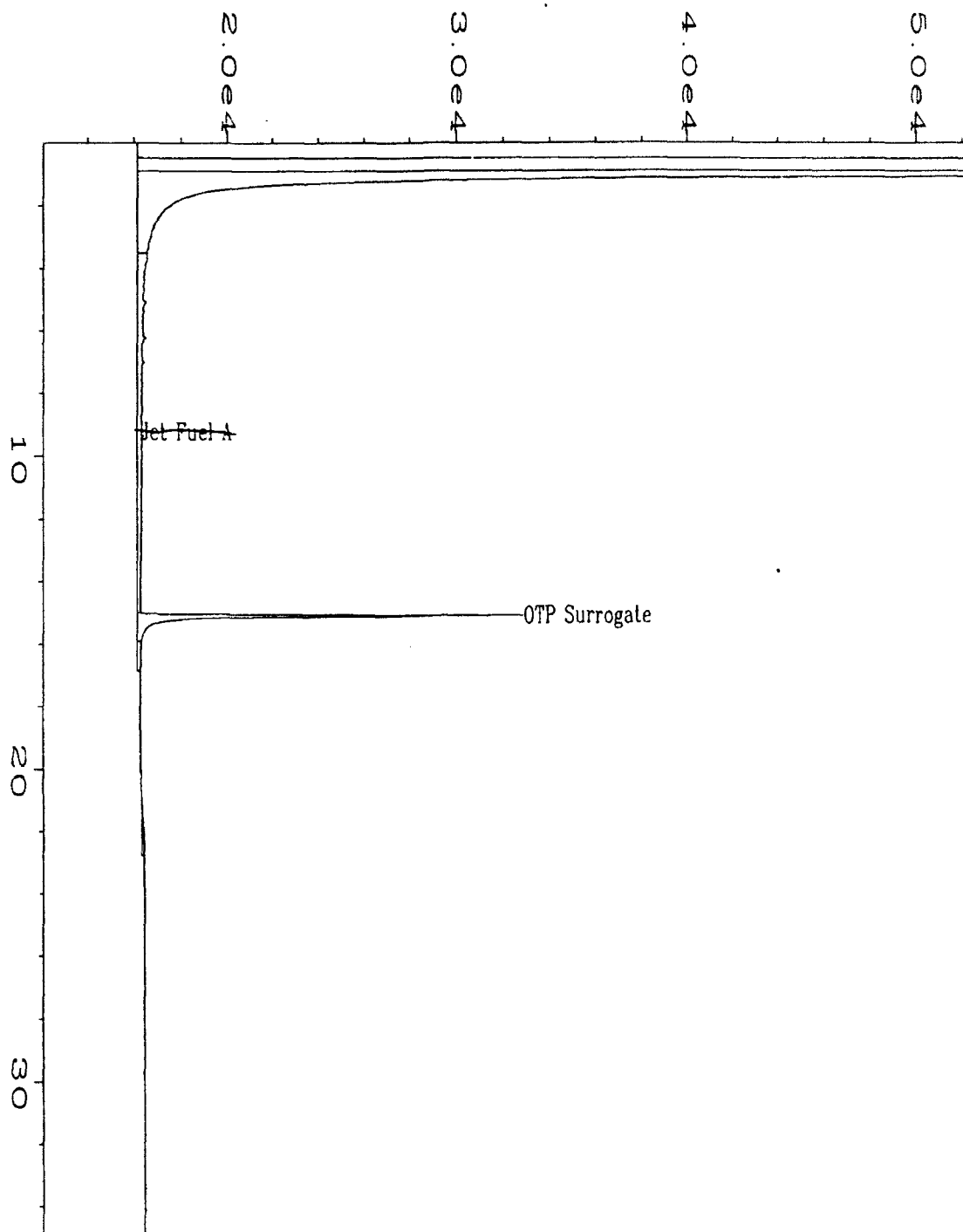
pm 4/22/95



Data File Name	: C:\HPCHEM\2\DATA\jet0405\020R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 20
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05184 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1E
Acquired on	: 06 Apr 95 02:40 AM	Analysis Method	: JET0405.M
Report Created on:	: 14 Apr 95 12:27 PM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT # MD24-MW26 WATER		

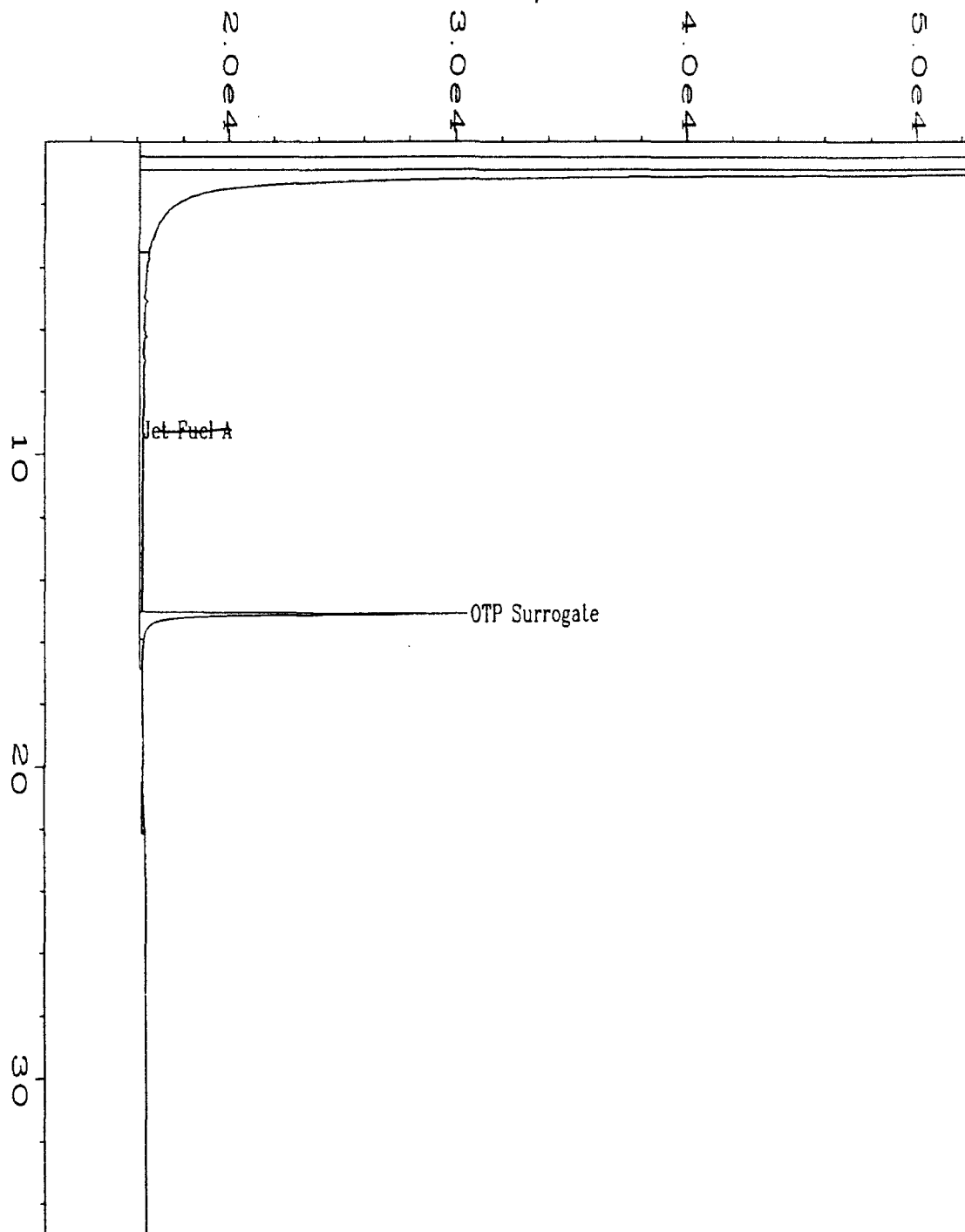


Data File Name	: C:\HPCHEM\2\DATA\jet0405\029R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 29
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05184 DF=1 <i>fr</i>	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Required on	: 06 Apr 95 03:22 PM	Analysis Method	: JET0405.MTH
Report Created on:	: 07 Apr 95 10:19 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT # MD24-MW26 WATER		



Data File Name	: C:\HPCHEM\2\DATA\jet0405\021R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 21
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05185 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BAS
Acquired on	: 06 Apr 95 03:30 AM	Analysis Method	: JET0405.MT
Report Created on:	: 14 Apr 95 12:27 PM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT # MS/MSD WATER		

Run 4/22/95



Data File Name	: C:\HPCHEM\2\DATA\jet0405\030R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 30
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05185 DF=1 - R	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 06 Apr 95 04:11 PM	Analysis Method	: JET0405.MTH
Report Created on:	: 07 Apr 95 10:20 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:59 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1063 CLIENT # MS/MSD WATER		

am 4/22/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

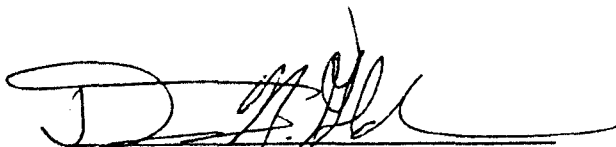
TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number : LCS040495 Matrix : WATER
Date Prepared : 4/3/95 Method Number : 3500/MOD.8015
Date Analyzed : 4/5/95
Sequence Number : JET10

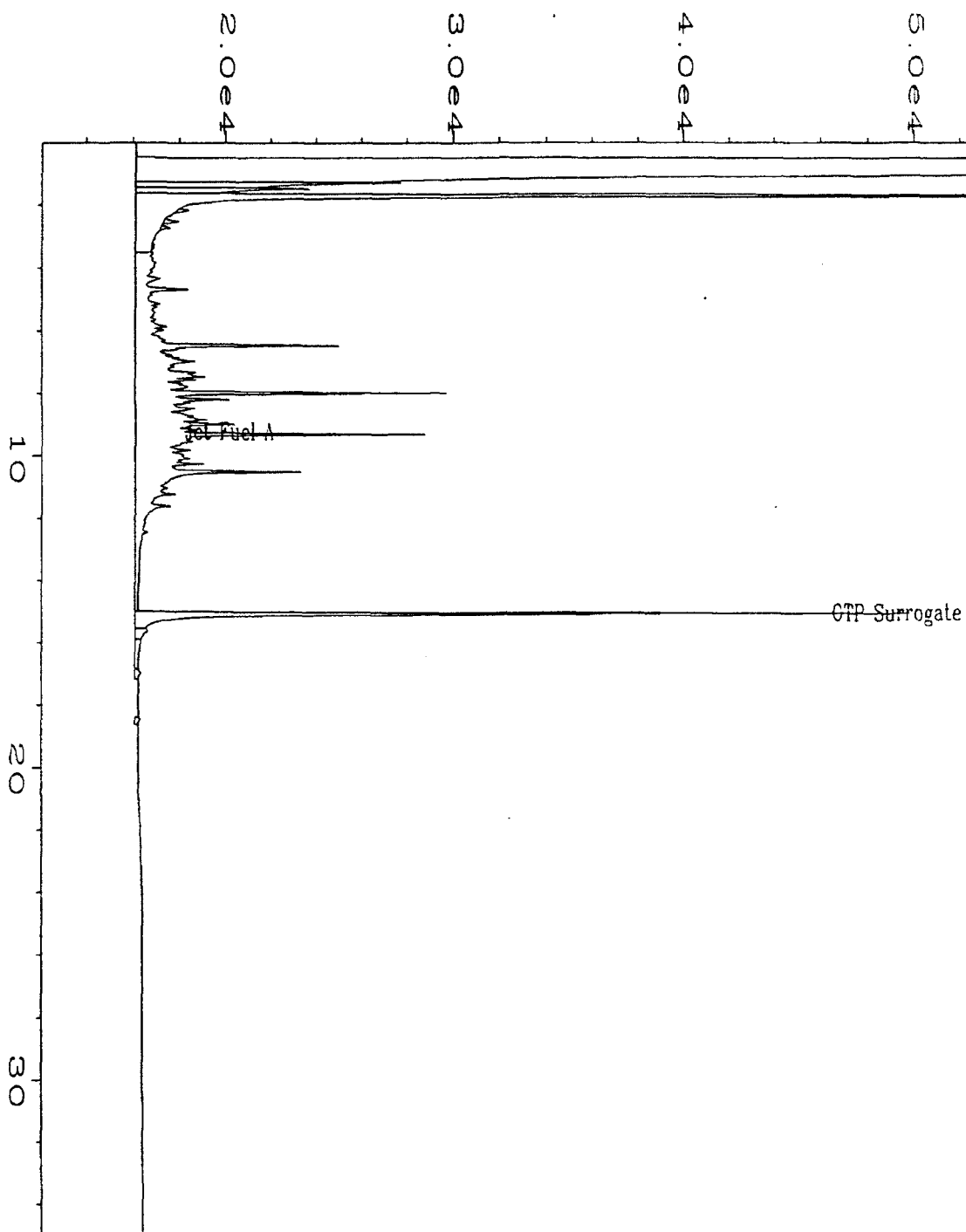
<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
JET FUEL	1000	855	86%	70%-130%

QUALIFIERS

U = TEH analyzed for but not detected.
B = TEH found in blank as well as sample (blank data should be compared).
E = Extrapolated value.
NA = Not Available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\jet0405\010R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TEH	Injection Number	: 1
Sample Name	: LCS040495 <i>R</i>	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 05 Apr 95 06:22 PM	Analysis Method	: JET0405.MTH
Report Created on:	06 Apr 95 08:56 AM	Sample Amount	: 0
Last Recalib on	: 06 APR 95 08:52 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number : LCS040495 Matrix : WATER
Date Prepared : 4/3/95 Method Number : 3500/MOD.8015
Date Analyzed : 4/4/95
Sequence Number : JET10

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
JET FUEL	1000	834	83%	70%-130%

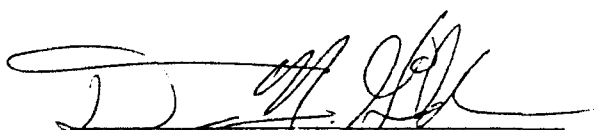
QUALIFIERS

U = TEH analyzed for but not detected.

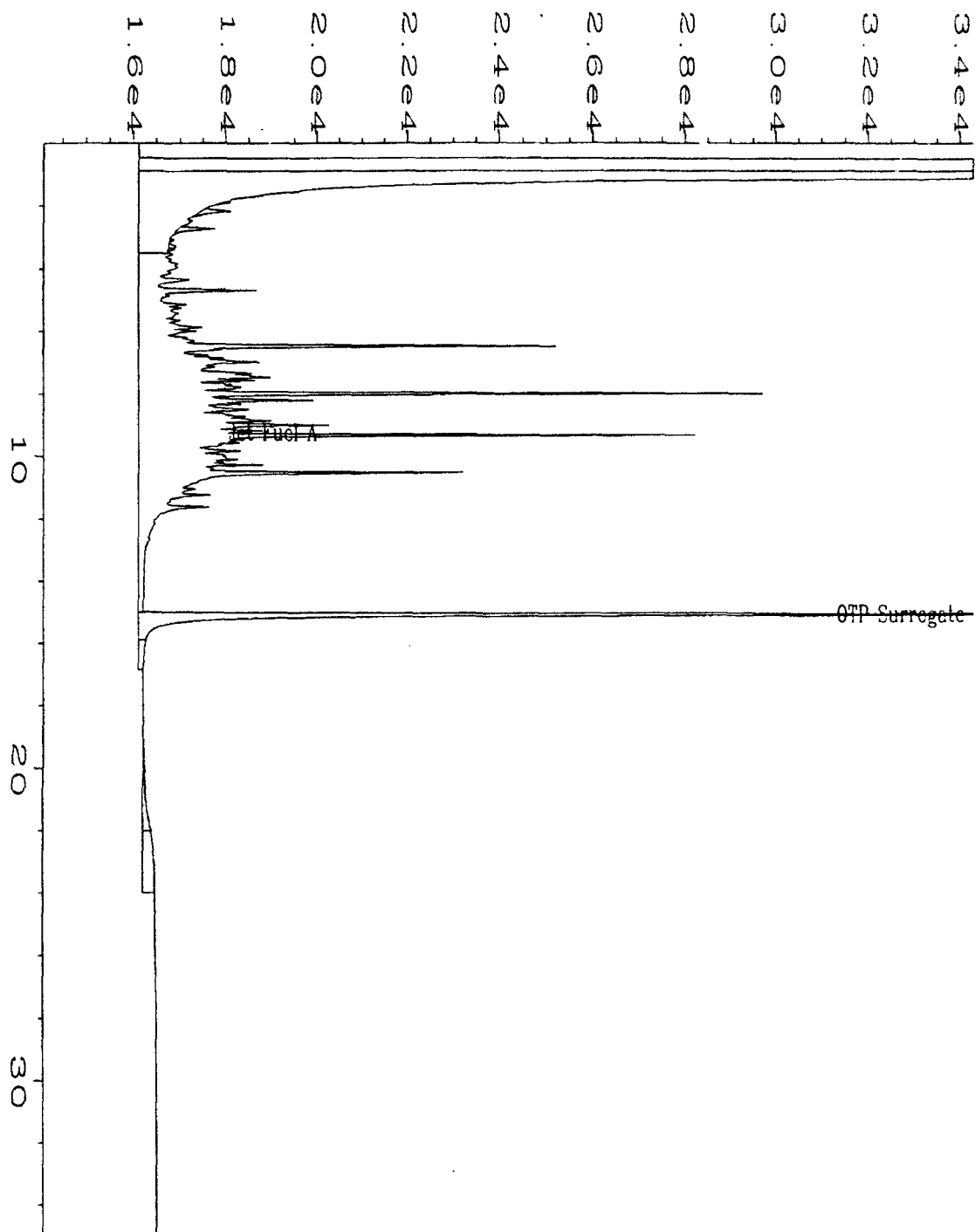
B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA = Not Available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0404\010R0801.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TEH	Injection Number	: 1
Sample Name	: LCS040495	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: JET0404.MTH
Acquired on	: 04 Apr 95 07:03 PM	Analysis Method	: JET0404.MTH
Report Created on	: 05 Apr 95 01:33 PM	Sample Amount	: 0
Last Recalib on	: 05 APR 95 10:34 AM	ISTD Amount	:
Multiplier	: 1		

External Standard Report

Data File Name : C:\HPCHEM\2\DATA\BX20415\014R0101.D
 Operator : T. Lockwood Page Number : 1
 Instrument : BTEX2 Vial Number : 14
 Sample Name : X05176;50;0.1 Injection Number : 1
 Run Time Bar Code: Sequence Line : 1
 Acquired on : 15 Apr 95 08:36 PM Instrument Method: BX20415.MTH
 Report Created on: 16 Apr 95 04:42 PM Analysis Method : BX20415A.MT
 Last Recalib on : 16 Apr 95 03:38 PM Sample Amount : 0
 Multiplier : 1 *X50* ISTD Amount :

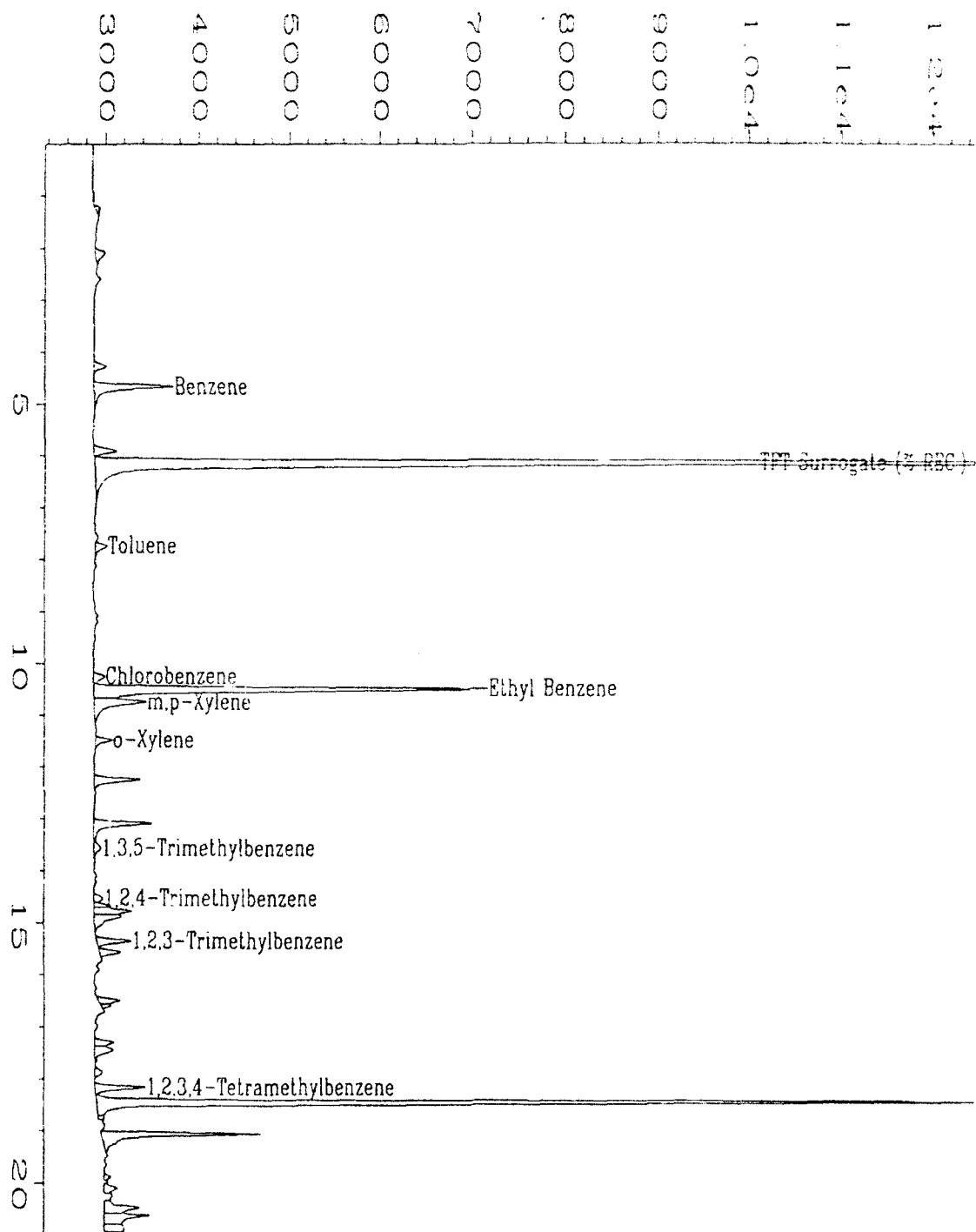
Sig. 2 in C:\HPCHEM\2\DATA\BX20415\014R0101.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
4.660	5594	BB	0.098	1	1.914	Benzene <i>X50</i>
6.143	86867	VB	0.096	1-R	87.270	TFT Surrogate (% REC.)
7.728	902	VB	0.104	1	0.350	Toluene
10.247	810	BV	0.102	1	0.373	Chlorobenzene
10.493	24823	VV	0.089	1	10.830	Ethyl Benzene <i>X50</i>
10.741	4517	VB	0.116	1	1.605	m,p-Xylene <i>X50</i>
11.477	958	BB	0.084	1	0.431	o-Xylene <i>ck use</i>
13.561	724	VB	0.149	1	0.223	1,3,5-Trimethylbenzene
14.531	656	BV	0.113	1	0.296	1,2,4-Trimethylbenzene
15.354	1942	PV	0.085	1	0.969	1,2,3-Trimethylbenzene
18.173	2698	PV	0.079	1	1.446	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
2	6.120	6.143	0.023

Holding time up

not used



Data File Name	: C:\HPCHEM\2\DATA\BX20415\014R0101.D	Page Number	: 1
Operator	: T. Lockwood	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05176;50;0.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20415.MTH
Acquired on	: 15 Apr 95 08:36 PM	Analysis Method	: BX20415A.MTH
Report Created on:	16 Apr 95 04:42 PM	Sample Amount	: 0
Last Recalib on	: 16 Apr 95 03:38 PM	ISTD Amount	:
Multiplier	: 1		

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\BX10417\017F1001.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX1 Vial Number : 17
 Sample Name : X05175;20;0.250 Injection Number : 1
 Run Time Bar Code: Sequence Line : 10
 Acquired on : 17 Apr 95 04:31 PM Instrument Method: BX10417A.M
 Report Created on: 17 Apr 95 07:29 PM Analysis Method : BX10417B.M
 Last Recalib on : 17 APR 95 07:07 PM Sample Amount : 0
 Multiplier : 20 ISTD Amount :
 Sample Info : Project#: 95-1063 Client#: MD75-MW4 Water

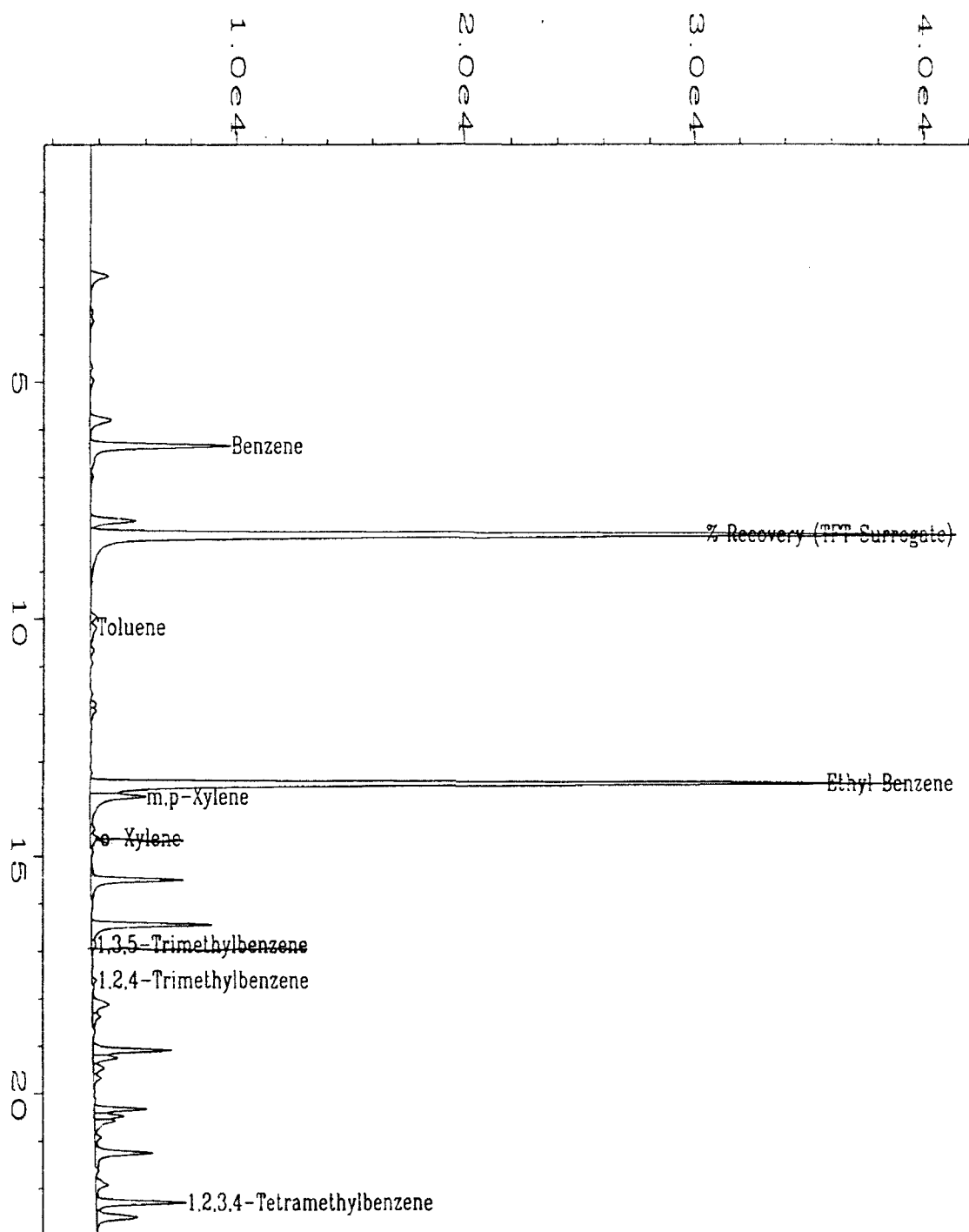
Sig. 1 in C:\HPCHEM\1\DATA\BX10417\017F1001.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
6.333	43572	VV	0.107	1	94.359	Benzene
8.218	261271	VV	0.106	1-R	1699.725	% Recovery (TFT Surrogate) 85%
10.172	3841	VV	0.196	1	9.015	Toluene
13.196	* not found *			1		Chlorobenzene
13.464	209657	VV	0.091	1	583.727	Ethyl Benzene
13.741	23300	VV	0.134	1	52.583	m,p-Xylene
14.613	3728	VV	0.129	1	9.673	o-Xylene
16.871	1985	VV	0.165	1	4.440	1,3,5-Trimethylbenzene
17.610	1119	PV	0.094	1	3.417	1,2,4-Trimethylbenzene
18.722	* not found *			1		1,2,3-Trimethylbenzene
22.301	22466	VV	0.089	1	92.176	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
2	8.275	8.218	-0.057

Not all calibrated peaks were found

Holding Time up not used
 for



Data File Name	: C:\HPCHEM\1\DATA\BX10417\017F1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 17
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05175;20;0.250	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX10417A.MTH
quired on	: 17 Apr 95 04:31 PM	Analysis Method	: BX10417B.MTH
Report Created on:	: 17 Apr 95 07:30 PM	Sample Amount	: 0
Last Recalib on	: 17 APR 95 07:07 PM	ISTD Amount	:
Multiplier	: 20		
Sample Info	: Project#: 95-1063 Client#: MD75-MW4	Water	

pm 4/28/95

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\BX10417\016F1001.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX1 Vial Number : 16
 Sample Name : X05174(20);0.250 Injection Number : 1
 Run Time Bar Code: Sequence Line : 10
 Acquired on : 17 Apr 95 03:51 PM Instrument Method: BX10417A.M
 Report Created on: 17 Apr 95 07:28 PM Analysis Method : BX10417B.M
 Last Recalib on : 17 APR 95 07:07 PM Sample Amount : 0
 Multiplier : 20 ISTD Amount :
 Sample Info : Project#: 95-1063 Client#: 75MP-45 Water

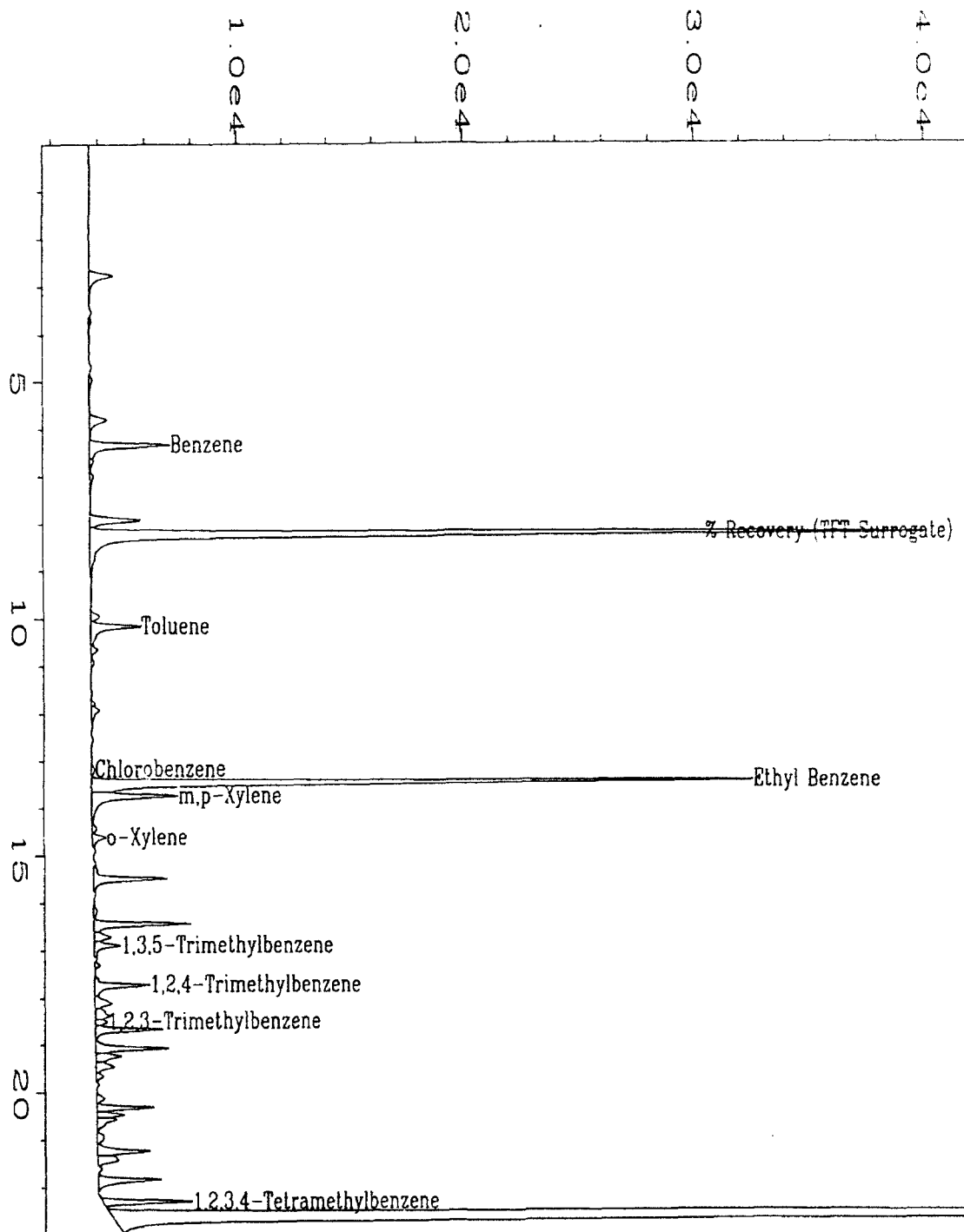
Sig. 1 in C:\HPCHEM\1\DATA\BX10417\016F1001.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
6.330	24882	VV	0.107	1	53.885	Benzene
8.213	252850	VV	0.106	1-R	1644.939	% Recovery (TFT Surrogate) 82%
10.151	16893	VV	0.114	1	39.647	Toluene
13.169	1325	VV	0.151	1	3.616	Chlorobenzene
13.456	165067	VV	0.088	1	459.579	Ethyl Benzene
13.738	29452	VV	0.115	1	66.467	m,p-Xylene
14.606	4565	VV	0.114	1	11.847	o-Xylene
16.889	7670	VV	0.102	1	17.154	1,3,5-Trimethylbenzene
17.726	15398	VV	0.096	1	47.038	1,2,4-Trimethylbenzene
18.503	2959	VV	0.087	1	9.089	1,2,3-Trimethylbenzene
22.302	19127	PV	0.079	1	78.479	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
2	8.275	8.213	-0.062

Holding Time
Up

not used
in



Data File Name	: C:\HPCHEM\1\DATA\BX10417\016F1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05174;20;0.250	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX10417A.MTH
Acquired on	: 17 Apr 95 03:51 PM	Analysis Method	: BX10417B.MTH
Report Created on:	: 17 Apr 95 07:29 PM	Sample Amount	: 0
Last Recalib on	: 17 APR 95 07:07 PM	ISTD Amount	:
Multiplier	: 20		
Sample Info	: Project#: 95-1063 Client#: 75MP-45	Water	

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\BX10413\059F0101.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX1 Vial Number : 59
 Sample Name : X05172;10;500ul Injection Number : 1
 Run Time Bar Code: Sequence Line : 1
 Acquired on : 15 Apr 95 01:57 AM Instrument Method: BX10414.MT
 Report Created on: 27 Apr 95 07:38 PM Analysis Method : BX10414B.V
 Last Recalib on : 15 APR 95 01:55 PM Sample Amount : 0
 Multiplier : ~~0.5~~ 10 ISTD Amount :
 Sample Info : Project#: 95-1063 Client#: MD75-MW8 Water

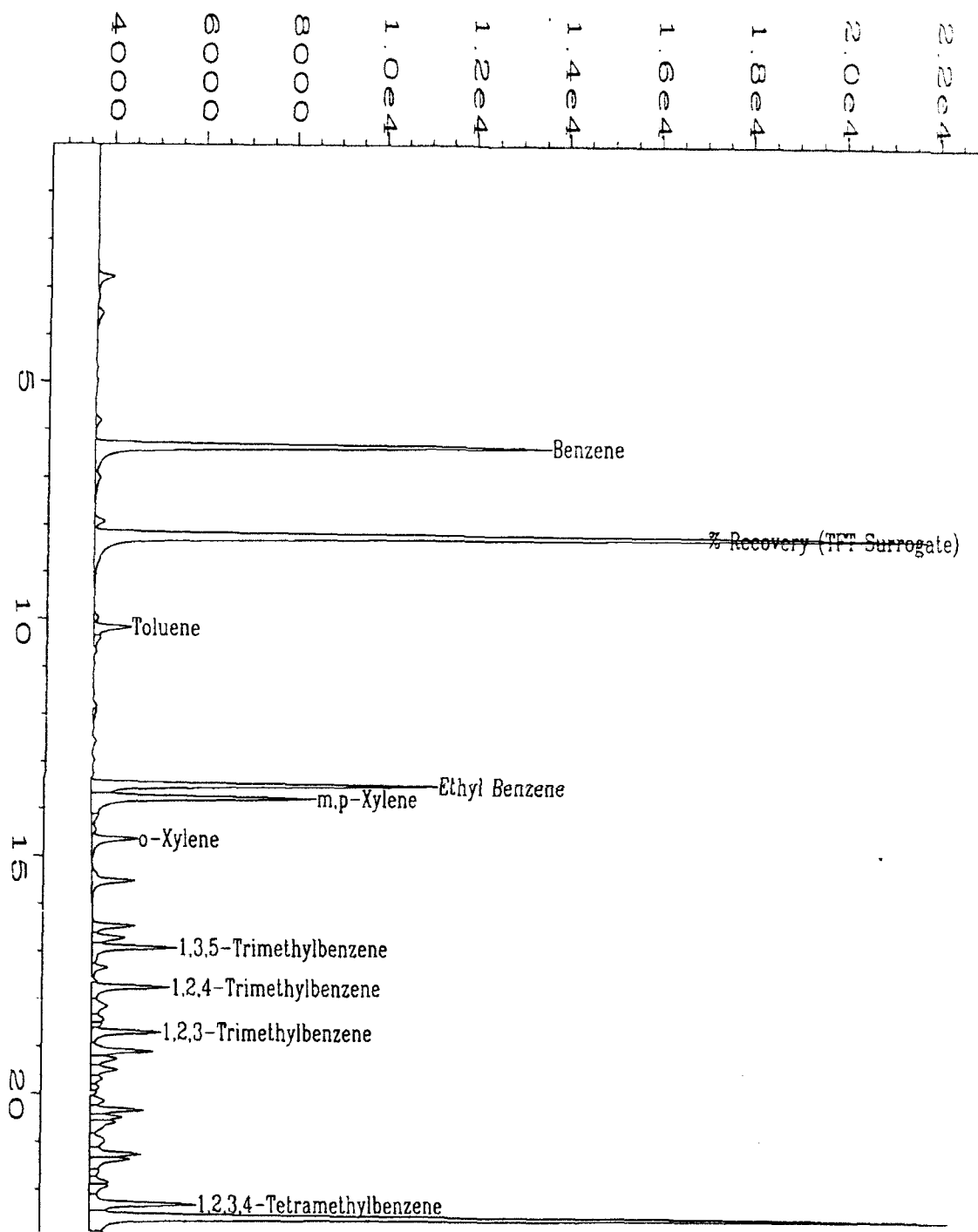
Sig. 1 in C:\HPCHEM\1\DATA\BX10413\059F0101.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
6.342	67582	VV	0.103	1	7.299	Benzene $\times 20$
8.231	124091	VV	0.105	1-R	40.116	% Recovery (TFT Surrogate) $\times 20$
10.170	5850	VV	0.105	1	0.675	Toluene
13.189	* not found *			1		Chlorobenzene
13.484	43118	VV	0.086	1	5.791	Ethyl Benzene $\times 20$
13.764	32604	VV	0.099	1	3.539	m,p-Xylene
14.632	7187	VV	0.106	1	0.906	o-Xylene
16.917	12049	VV	0.096	1	1.211	1,3,5-Trimethylbenzene
17.754	10787	VV	0.094	1	1.481	1,2,4-Trimethylbenzene
18.694	9541	VV	0.093	1	1.426	1,2,3-Trimethylbenzene
22.309	15804	HH	0.101	1	2.847	1,2,3,4-Tetramethylbenzene

Time Reference Peak	Expected RT	Actual RT	Difference
2	8.228	8.231	0.003

Not all calibrated peaks were found

*past holding time
 Ret DF = 1*



Data File Name	: C:\HPCHEM\1\DATA\BX10413\059F0101.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 59
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05172;10;500ul	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10414.MTH
quired on	: 15 Apr 95 01:57 AM	Analysis Method	: BX10414B.MTH
Report Created on:	27 Apr 95 07:38 PM	Sample Amount	: 0
Last Recalib on	: 15 APR 95 01:55 PM	ISTD Amount	:
Multiplier	: 0.5		
Sample Info	: Project#: 95-1063 Client#: MD75-MW8	Water	

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\BX10417\015F1001.D
 Operator : C.J. Cook Page Number : 1
 Instrument : BTEX1 Vial Number : 15
 Sample Name : X05173;20;0.250 Injection Number : 1
 Run Time Bar Code: Sequence Line : 10
 Acquired on : 17 Apr 95 03:12 PM Instrument Method: BX10417A.M
 Report Created on: 17 Apr 95 07:28 PM Analysis Method : BX10417B.M
 Last Recalib on : 17 APR 95 07:07 PM Sample Amount : 0
 Multiplier : 20 ISTD Amount :
 Sample Info : Project#: 95-1063 Client#: MD75-MW14 Water

Sig. 1 in C:\HPCHEM\1\DATA\BX10417\015F1001.D

Ret Time	Area	Type	Width	Ref#	ug/L	Name
6.329	80094	VV	0.108	1	173.451	Benzene
8.214	279353	VV	0.107	1-R	1817.356	% Recovery (TFT Surrogate) 9/
10.158	2133	VV	0.192	1	5.006	Toluene
13.196	* not found *			1		Chlorobenzene
13.453	118673	VV	0.090	1	330.408	Ethyl Benzene
13.732	14373	VV	0.144	1	32.436	m,p-Xylene B
14.603	2380	VV	0.141	1	6.176	o-Xylene
16.876	2003	VV	0.149	1	4.479	1,3,5-Trimethylbenzene
17.775	* not found *			1		1,2,4-Trimethylbenzene
18.670	1658	VV	0.120	1	5.092	1,2,3-Trimethylbenzene
22.293	15313	PV	0.089	1	62.829	1,2,3,4-Tetramethylbenzene

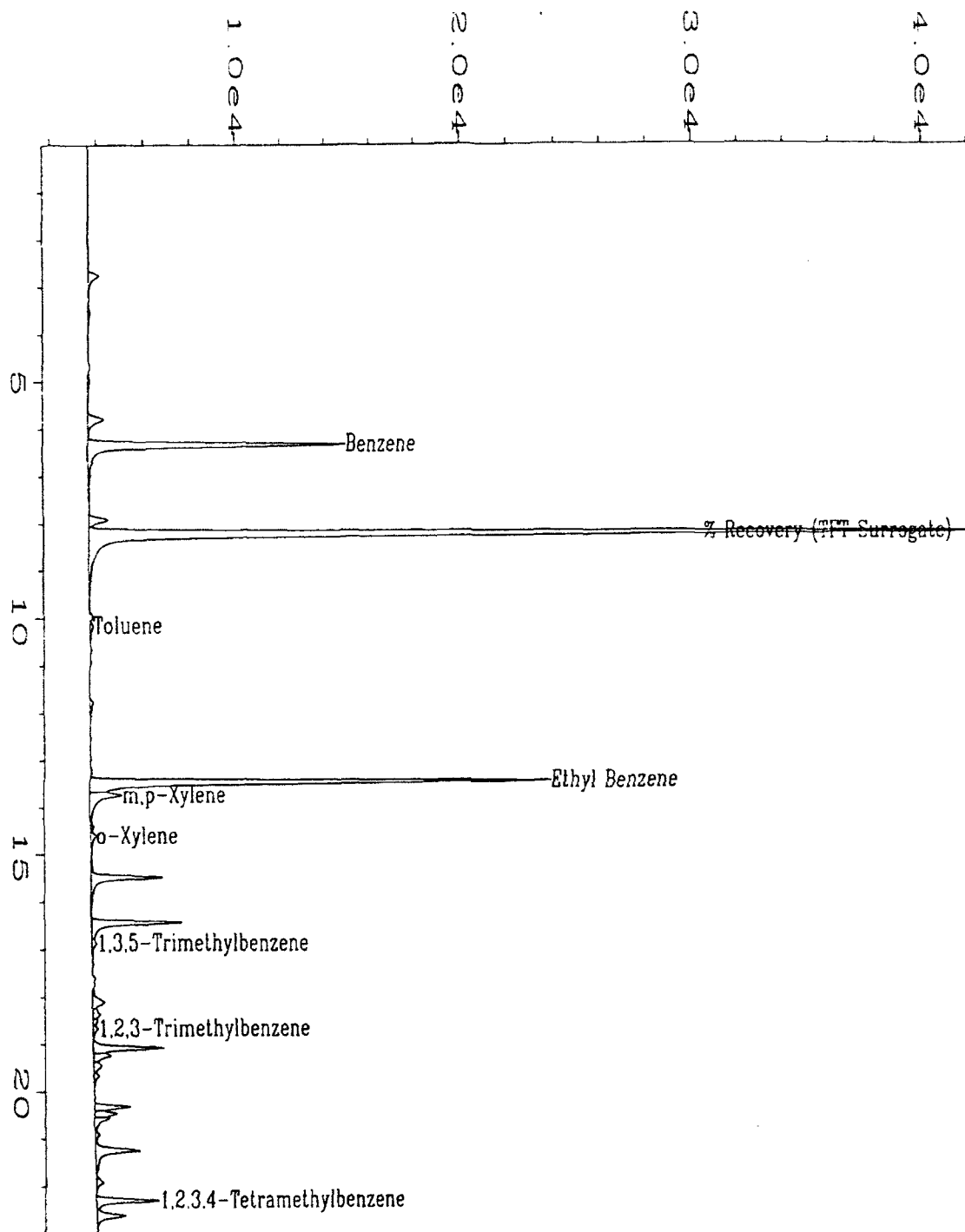
Time Reference Peak	Expected RT	Actual RT	Difference
2	8.275	8.214	-0.061

Not all calibrated peaks were found

Holding Time

up

not used
PK



Data File Name	: C:\HPCHEM\1\DATA\BX10417\015F1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 15
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05173;20;0.250	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX10417A.MTH
quired on	: 17 Apr 95 03:12 PM	Analysis Method	: BX10417B.MTH
Report Created on:	: 17 Apr 95 07:40 PM	Sample Amount	: 0
Last Recalib on	: 17 APR 95 07:07 PM	ISTD Amount	:
Multiplier	: 1		



August 9, 1995

MR TODD WIEDEMEIER
PARSONS ENGINEERING SCIENCE INC
1700 BROADWAY SUITE 900
DENVER CO 80290

Data Report : 95-2330
Client Project : MacDILL/
722450.21020

Dear Mr. Wiedemeier:

Enclosed are the analytical results for the samples shown in the Sample Log Sheet. The enclosed data have been reviewed for quality assurance. If you have any questions concerning the reported information, please contact Patty McClellan, Program Manager, or me.

Please Note: Samples marked for return on the Sample Log Sheet are considered hazardous, unsuitable for municipal disposal or were placed on hold at your request. Samples considered hazardous or unsuitable for municipal disposal will be returned to you immediately. Samples placed on hold will be returned and samples not considered hazardous will be disposed of one (1) month from the date of this letter.

The invoice for this work will be mailed to your Accounts Payable department shortly.

Thank you for using the services of Evergreen Analytical.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jack Barney".

Jack Barney
President

TM



CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Project: 95-2330

Parsons Engineering Science, Inc. (PES) Project: MacDill AFB
722450.21020

Sample Receipt

On July 22, 1995, ten groundwater samples were received at EAL for analysis under Subcontract 722450.SC02. Refer to the EAL Check-in Record for specific information regarding the condition of samples upon receipt. Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES identifications.

Data Package

All data are reported from one EAL project. Each EAL project represents a group of samples received on a given day.

An invoice will be generated that references this project number.

All required matrix spike/matrix spike (MS/MSD) samples were analyzed. Laboratory Control Samples (LCS) and Method Blanks were analyzed when required and also are included in the data package.

BTEX, Trimethylbenzenes, Tetramethylbenzene, Chlorobenzene, Method SW8020

All samples were analyzed for BTEX within holding time.

Sample 24PZ-1S was analyzed at a dilution factor of 10 due to the presence of target compounds beyond the linear range of the calibration curve. The reporting limits were increased accordingly.

Matrix spike/matrix spike duplicate analysis was performed on sample 24PZ-3 with acceptable recoveries.

The spike recovery for 1,3,5-TMB was above the EAL acceptance criteria. All associated samples were non-detect for this compound.

There are no other quality control anomalies to report.

Page Two
Case Narrative
Parsons Engineering Science, Inc.

Methane, RSKSOP175

Samples 24PZ-3S, 24PZ-5S and 24PZ-1S were analyzed at dilutions ranging from DF = 10 to DF = 50 due to contamination in the sample. The reporting limits have been adjusted accordingly.

There are no quality assurance anomalies to report.

Anions, Method EPA300.0

Sample 24PZ-3D was analyzed at dilutions for sulfate, chloride and nitrite analyses do to concentrations of target analytes in the sample. The reporting limits were adjusted accordingly.

Samples 24PZ-3MS1 and 24PZ-3MS2 were analyzed upon receipt as discrete samples rather than as the MS/MSD for sample 24PZ-3S. The samples had holding times which would have expired if the analysts had not analyzed them over the weekend, and the spike criteria for this sample was not apparent to them. Please see sample 24PZ-2S for MS/MSD results.

There are no other quality control anomalies to report.

Disk Deliverables

The disk deliverables are included with the hard copy data package. Quality control samples are not included on the disk. Please note that blank spaces in the laboratory detection limit and/or practical quantitation limit (PQL) column indicate that there is not detection limit or PQL for that analyte.

A hard copy of the spreadsheet is included.


Patricia A. McClellan, Program Manager

Evergreen Analytical Sample Log Sheet

Project # 95-2330

Date(s) Sampled: 7/21/95 COC _____

Date Due: 7/31/95-BTEX
8/7/95 -OTHERS

Date Received: 7/22/95 0900 _____

Holding Time(s): 7/23-NO2,N03
7/28-BTEX,METHANE
Rush STANDARD

Client Project I.D. MacDILL/722450.21020

Client: PARSONS ENGINEERING SCIENCE

Shipping Charges N/A

Address: 1700 BROADWAY SUITE 900

E.A. Cooler # 434

DENVER, CO 80290

Airbill # FEDEX 4389548376

Contact: JOHN HICKS/TODD WIEDEMEIER

Custody Seal Intact? Y

Client P.O. 722450.SC02

Cooler X Bottles _____

Phone #831-8100 Fax #831-8208

COC Present Y

Sample Tags Present? Y

Sample Tags Listed? Y

Sample(s) Sealed? Y

Special Invoicing/Billing

Special Instructions*INCLUDES TMB's, TeMB, AND CHLOROGENZENE. HOLD METHANE & ANIONS ON X09250D-G (24PZ-E01).

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X09242A-C	24PZ-3S	BTEX 602*	W	40V	2
X09242MSA-C	24PZ-3MS1	"	"	"	"
X09242MSDA-C	24PZ-3MS2	"	"	"	"
X09245A-C	24PZ-3D	"	"	"	"
X09246A-C	24PZ-5S	"	"	"	"
X09247A-C	24PZ-4S	"	"	"	"
X09248A-C	24PZ-2S	"	"	"	"
X09249A-C	24PZ-2R	"	"	"	"
X09250A-C	24PZ-E01	"	"	"	"
X09451A-C	24PZ-1S	"	"	"	"
X09252A/B	TRIP BLANK	"	"	"	"
X09242D-F	24PZ-3S	METHANE	W	40V	2
X09242MSD-F	24PZ-3MS1	"	"	"	"
X09242MSDD-F	24PZ-3MS2	"	"	"	"
X09245D-F	24PZ-3D	"	"	"	"
X09246D-F	24PZ-5S	"	"	"	"

R=Sample to be returned

Route GC/MS _____ GC 3 Metals _____ Wet Chem 1 SxPrep _____ Acct. 1
To

SxRec C QA/QC C Sales C File Orig

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X09247D-F	24PZ-4S	METHANE	"	"	"
X09248D-F	24PZ-2S	"	"	"	"
X09249D-F	24PZ-2R	"	"	"	"
X09451D-F	24PZ-1S	"	"	"	"
X09250D-F	24PZ-E01	HOLD	"	"	"
X09242G	24PZ-3S	ANIONS-Cl, NO2, NO3, SO4	W	125P	B5
X09242MSG	24PZ-3MS1	"	"	"	"
X09242MSDG	24PZ-3MS2	"	"	"	"
X09245G	24PZ-3D	"	"	"	"
X09246G	24PZ-5S	"	"	"	"
X09247G	24PZ-4S	"	"	"	"
X09248G	24PZ-2S	"	"	"	"
X09249G	24PZ-2R	"	"	"	"
X09451G	24PZ-1S	"	"	"	"
X09250G	24PZ-E01	HOLD	"	"	"

Page 2 of 2 Pages

Project # 95-2330

R=Sample to be returned

AD-A286 946

TREATABILITY STUDY IN SUPPORT OF INTRINSIC REMEDIATION
FOR SITE DT 24 AT MACDILL AIR FORCE BASE FLORIDA VOLUME
2(U) PARSONS ENGINEERING SCIENCE INC DENVER CO JAN 97

18/10

UNCLASSIFIED

XC-AFCEE

NL

END
FILMED
DTIC

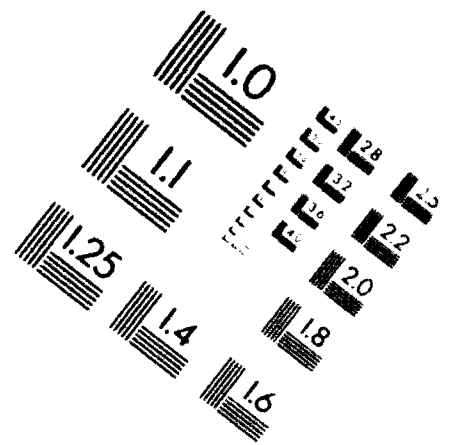
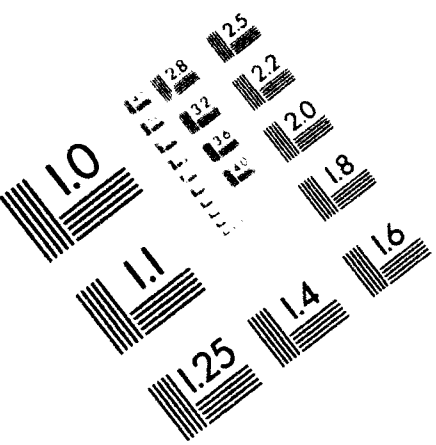


AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910

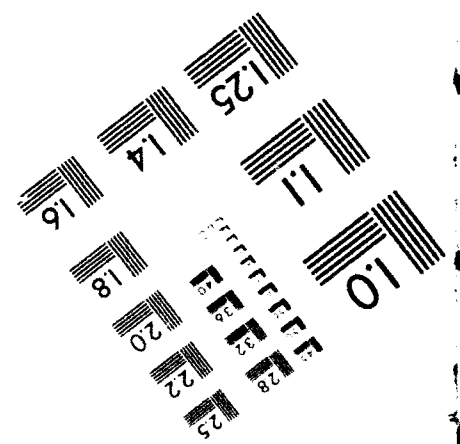
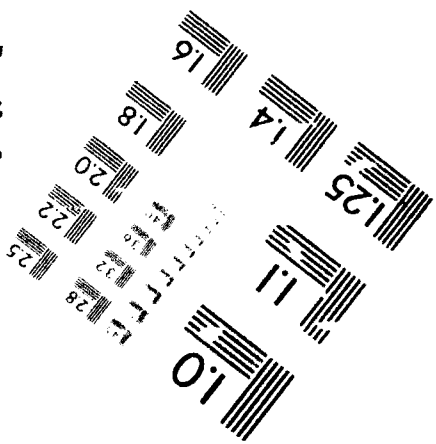
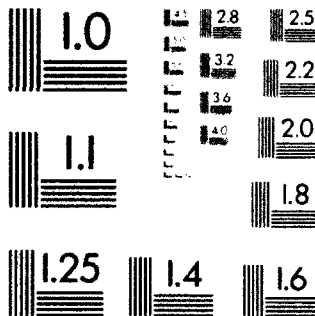
301/587-8202



Centimeter



Inches



MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X09247D-F	24PZ-4S	METHANE	"	"	"
X09248D-F	24PZ-2S	"	"	"	"
X09249D-F	24PZ-2R	"	"	"	"
X09451D-F	24PZ-1S	"	"	"	"
X09250D-F	24PZ-E01	HOLD	"	"	"
X09242G	24PZ-3S	ANIONS-Cl, NO2, NO3, SO4	W	125P	B5
X09242MSG	24PZ-3MS1	"	"	"	"
X09242MSDG	24PZ-3MS2	"	"	"	"
X09245G	24PZ-3D	"	"	"	"
X09246G	24PZ-5S	"	"	"	"
X09247G	24PZ-4S	"	"	"	"
X09248G	24PZ-2S	"	"	"	"
X09249G	24PZ-2R	"	"	"	"
X09451G	24PZ-1S	"	"	"	"
X09250G	24PZ-E01	HOLD	"	"	"

Page 2 of 2 Pages

Project # 95-2330

R=Sample to be returned

Evergreen Analytical Sample Receipt/Check-in Record

Date & Time Rec'd: 7/22/95 0900 Shipped Via: FEDEX 4389548

Client: PARSONS ES (Airbill # if applicable)

Client Project ID(s): 722452 21020

EAL Project # (s): 95-2330

EAL Cooler(s): (Y) N

Cooler# 2/34

Ice packs (Y) N (Y) N (Y) N (Y) N (Y) N

Temperature °C 6

1. Custody seal(s) present:

Seals on cooler intact

Seals on bottle intact

2. Chain of Custody present:

3. Samples Radioactive: (Comment on COC if > 0.5m/b)

4. Containers broken or leaking: (Comment on COC if Y)

5. Containers labeled:

6. COC agrees w/ bottles received: (Comment on COC if Y)

7. COC agrees w/ labels: (Comment on COC if Y)

8. Headspace in vials-waters only: (Comment on COC if Y)

9. VOA samples preserved:

10. pH measured on metals, cyanide or phenolics*:

List discrepancies

*Non-EAL provided containers only, water samples only.

11. Metal samples present:

Total _____, Dissolved _____, TCLP _____

D or PD to be filtered:

T,TR,D,PD to be Preserved:

12. Short holding times:

Specify parameters NO₂, NO₃

13. Multi-phase sample(s) present:

14. COC signed w/ date/time:

Comments: #6, #7 Bottles labeled 24P2-3ms1 + 3ms2. C.O.C reads 24P2-3ms1 + 3ms2.

We received bottles for 24P2-E01 for origin + methane analysis - not on C.O.C.

(Additional comments on back)

Custodian Signature/Date: Leopold Black 7/22/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB1072795
Date Prepared : 7/27/95
Date Analyzed : 7/27/95

Client Project No. : MacDill/722450.2102
Lab Project No. : 95-2330
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1072712

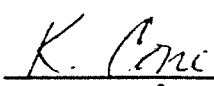
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		92%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

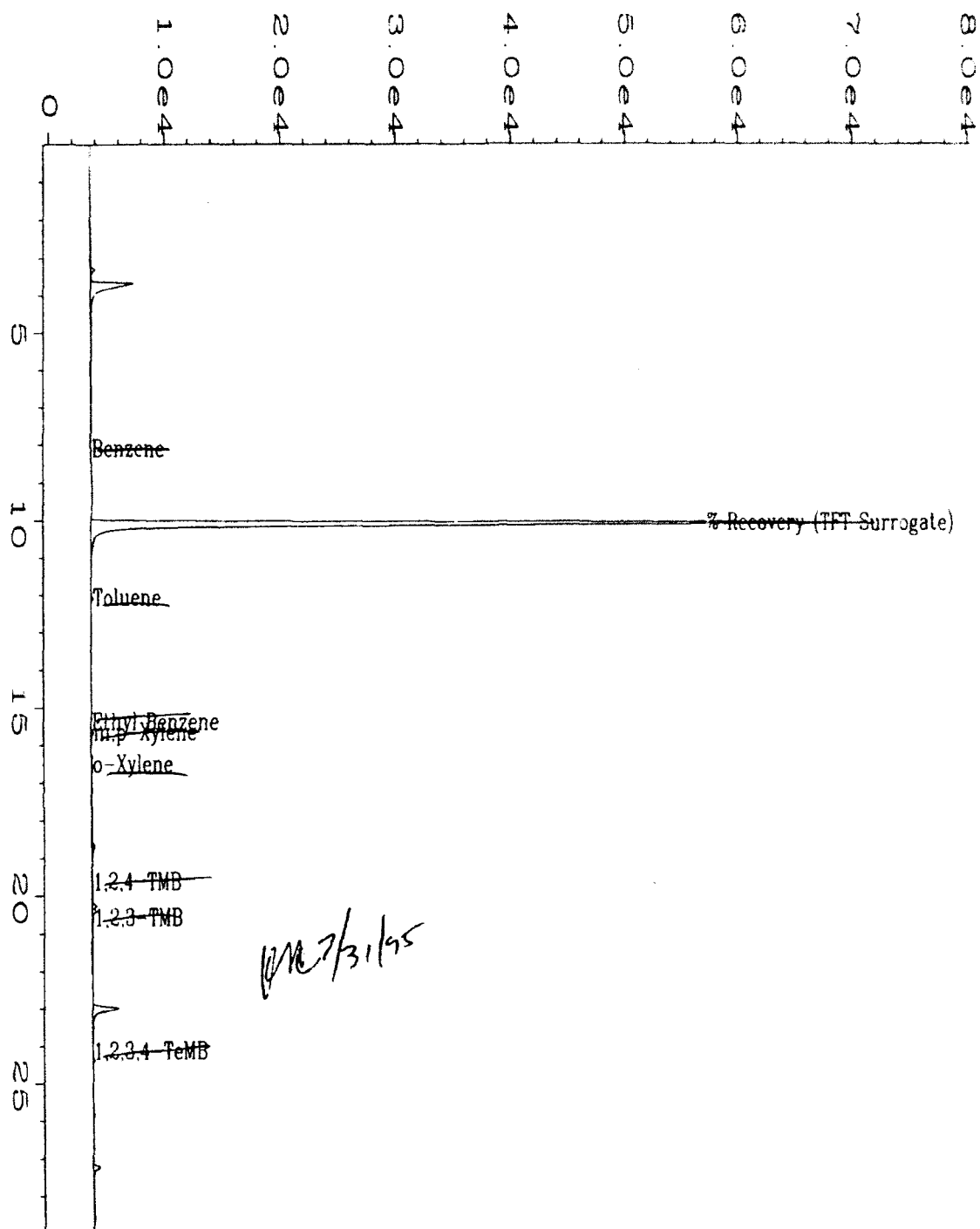
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

BTEX2330.XLS



Data File Name	: D:\HPCHEM\1\DATA\BX10727\012F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 12
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: MB1072795	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX10727.MTH
Acquired on	: 27 Jul 95 04:14 PM	Analysis Method	: BX10727.MTH
Report Created on:	01 Aug 95 10:10 AM	Sample Amount	: 0
Last Recalib on	: 27 JUL 95 02:46 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB1072895	Client Project No.	: MacDill/722450.2102
Date Prepared	: 7/28/95	Lab Project No.	: 95-2330
Date Analyzed	: 7/28/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1072810

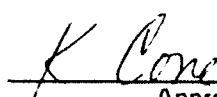
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limit).

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

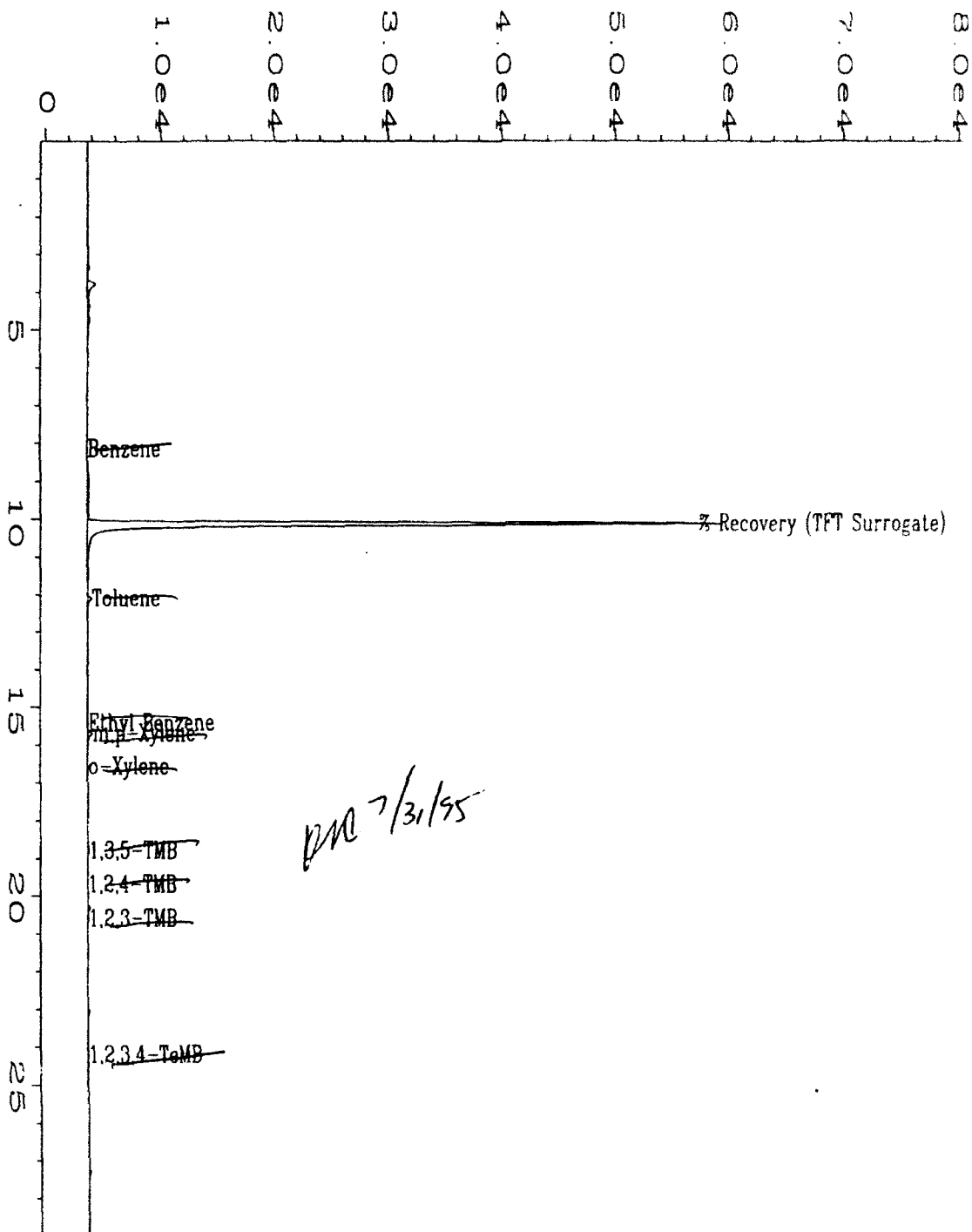
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
R = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

BTEX2330.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10728\010F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 10
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: MB1072895	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10728.MTH
quired on	: 28 Jul 95 02:44 PM	Analysis Method	: BX10728.MTH
port Created on	: 30 Jul 95 12:11 PM	Sample Amount	: 0
Last Recalib on	: 29 JUL 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB1072995	Client Project No.	: MacDill/722450.2102
Date Prepared	: 7/29/95	Lab Project No.	: 95-2330
Date Analyzed	: 7/29/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1072903

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		79%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

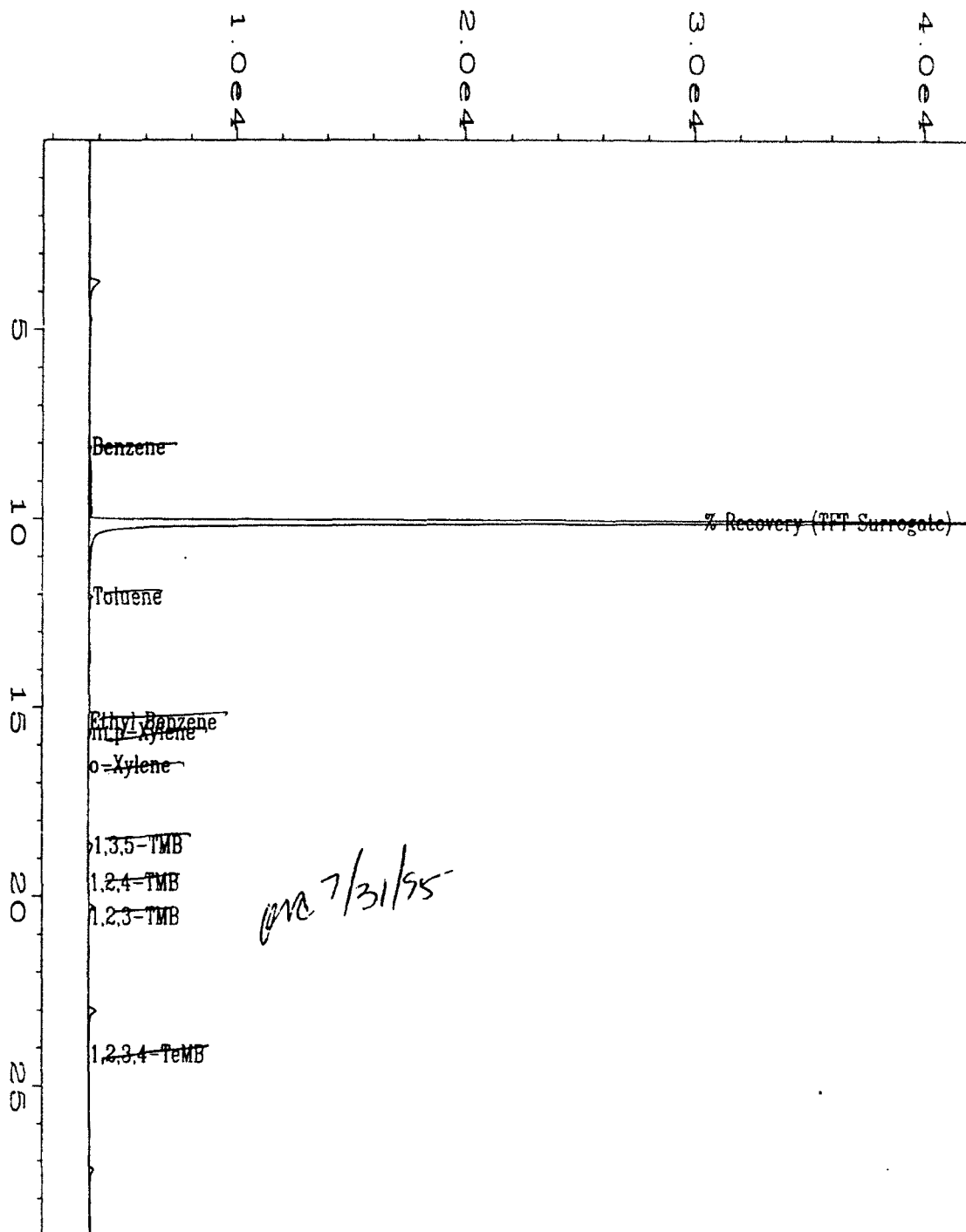
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

BTEX2330.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10729\003F0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 3
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: MB1072995	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX10728.MTH
Acquired on	: 29 Jul 95 11:08 AM	Analysis Method	: BX10728.MTH
Report Created on	: 30 Jul 95 12:55 PM	Sample Amount	: 0
Last Recalib on	: 29 JUL 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-3S	Client Project No.	: MacDill/722450.2102
Lab Sample Number	: X09242	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: 602
Date Prepared	: 7/27/95	Matrix	: Water
Date Analyzed	: 7/27/95	Lab File No.	: BX1072718
		Method Blank No.	: MB1072795

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		89%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

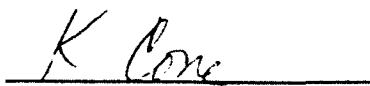
U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

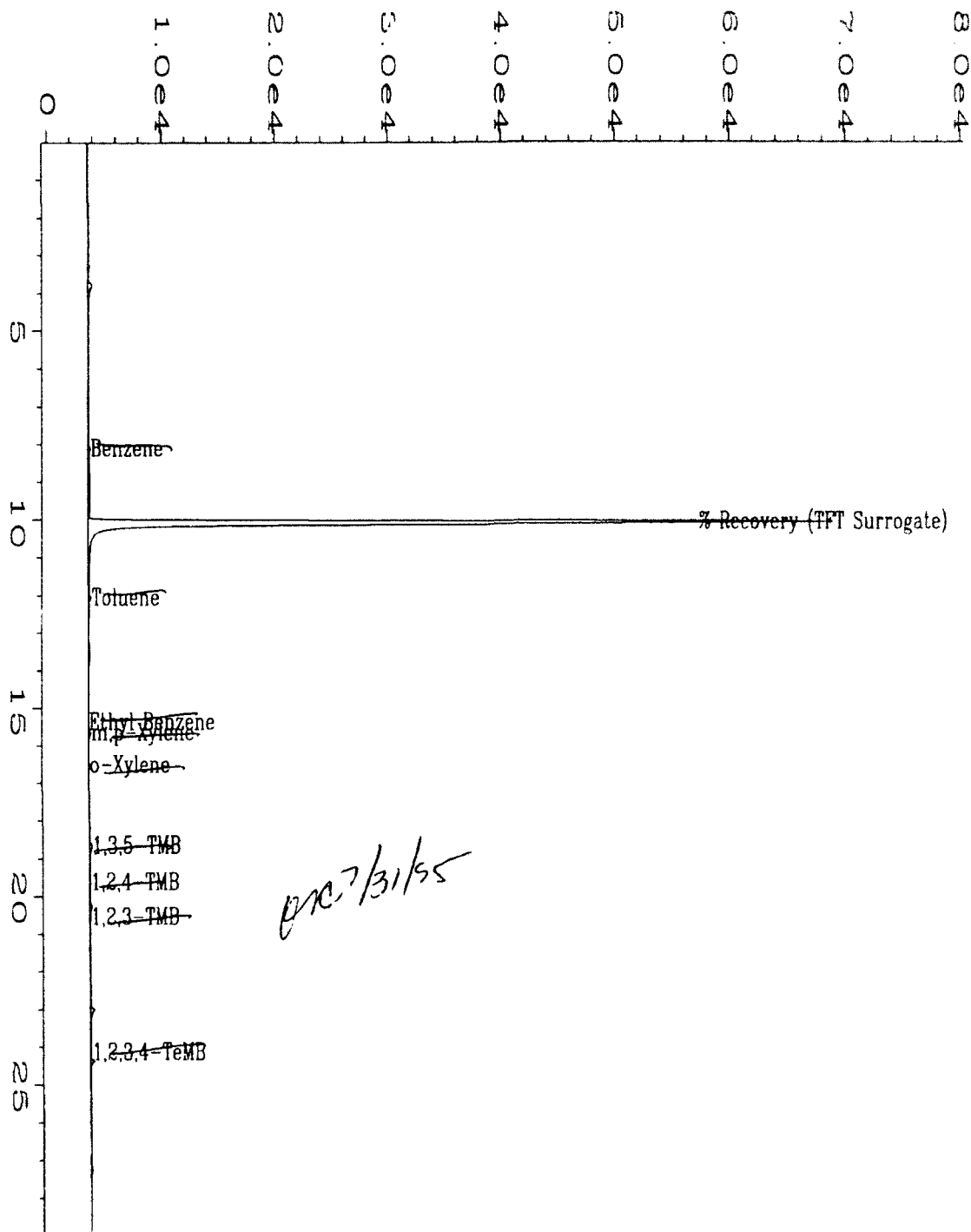
RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved

BTEX2330.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10727\018F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 18
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09242;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX10727.MTH
Acquired on	: 27 Jul 95 08:23 PM	Analysis Method	: BX10727.MTH
Report Created on:	27 Jul 95 11:21 PM	Sample Amount	: 0
Last Recalib on	: 27 Jul 95 02:46 PM	ISTD Amount	:
Multiplier	: 1		

Client ID: 24PZ-35

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-3D	Client Project No.	: MacDill/722450.2102
Lab Sample Number	: X09245	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: 602
Date Prepared	: 7/27/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: BX1072726
		Method Blank No.	: MB1072795

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		81%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

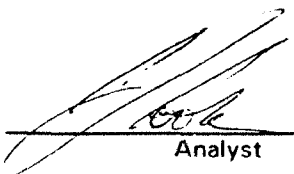
E = Extrapolated value.

U = Compound analyzed for, but not detected.

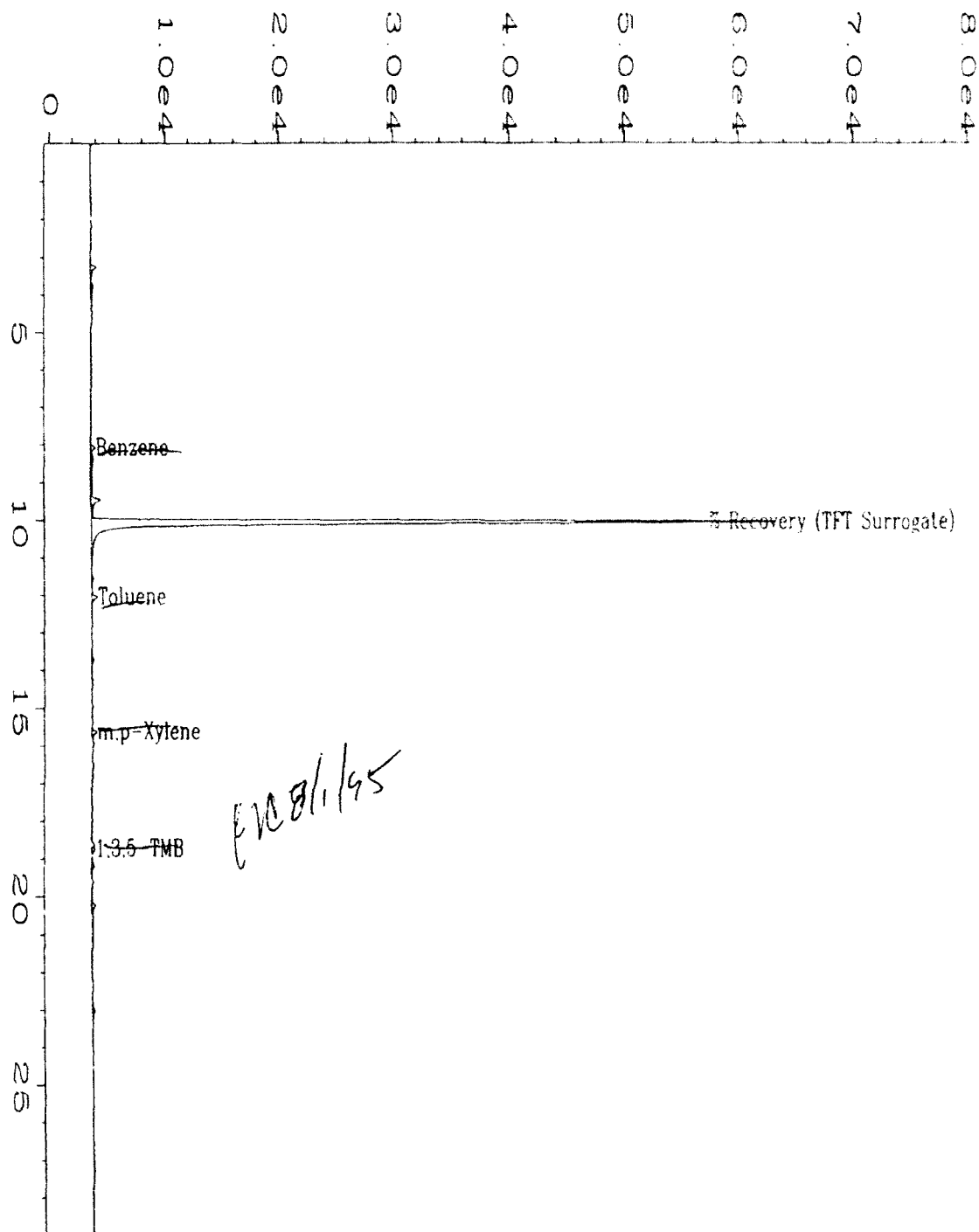
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: D:\HPCHEM\1\DATA\BX10727\026F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 26
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09245;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10727.MTH
Acquired on	: 28 Jul 95 01:55 AM	Analysis Method	: BX10727.MTH
Report Created on	: 01 Aug 95 11:37 AM	Sample Amount	: 0
Last Recalib on	: 27 JUL 95 02:46 PM	ISTD Amount	:
Multiplier	: 1		

Client ID: 24PZ-3D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : 24PZ-5S
Lab Sample Number : X09246
Date Sampled : 7/21/95
Date Received : 7/22/95
Date Prepared : 7/27/95
Date Analyzed : 7/28/95

Client Project No. : MacDill/722450.2102
Lab Project No. : 95-2330
Dilution Factor : 1.00
Method : 602
Matrix : Water
Lab File No. : BX1072727
Method Blank No. : MB1072795

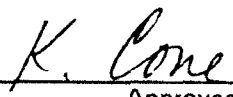
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		75%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

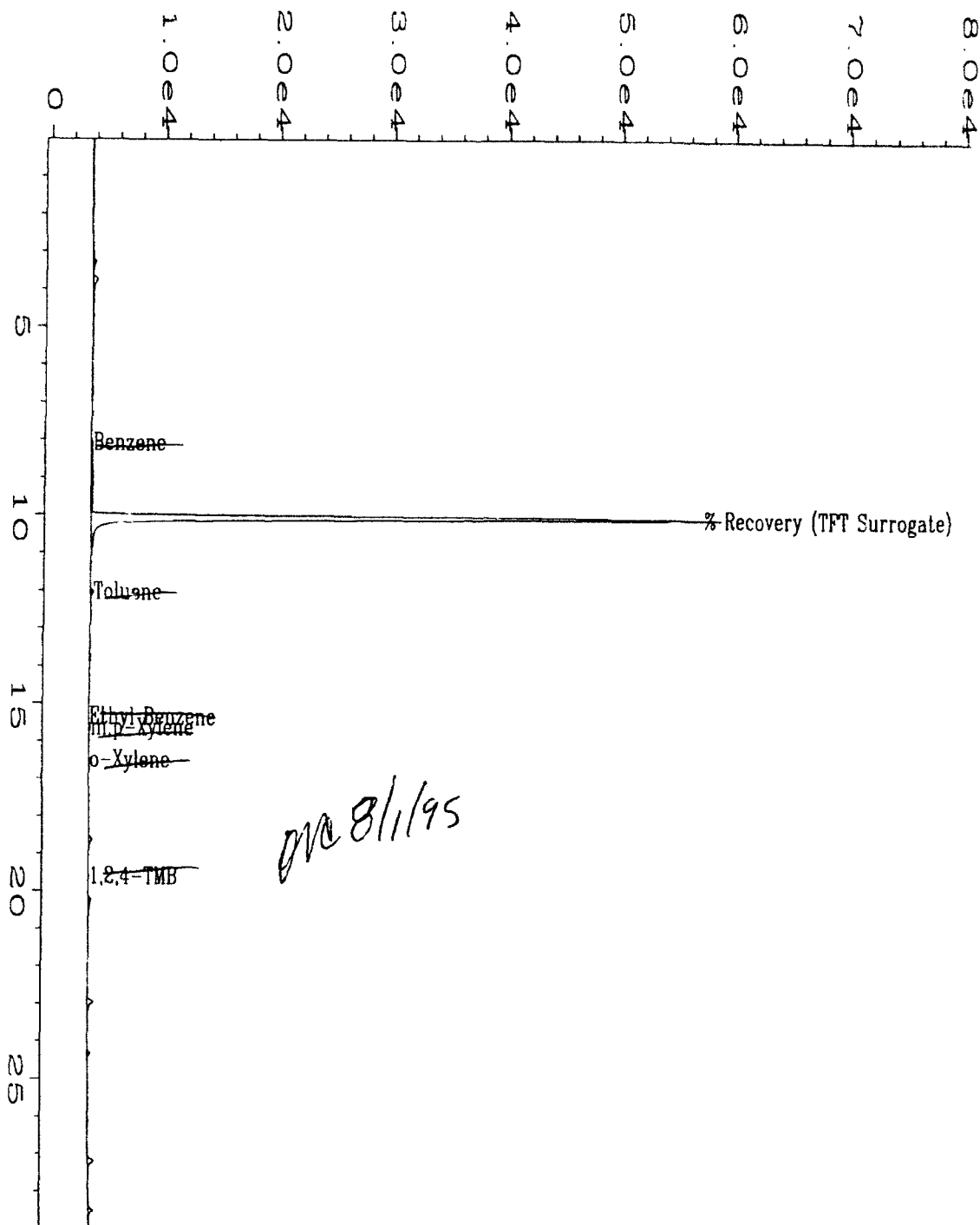
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

BTEX2330.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10727\027F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 27
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09246;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10727.MTH
Acquired on	: 28 Jul 95 02:37 AM	Analysis Method	: BX10727.MTH
Report Created on	: 01 Aug 95 11:13 AM	Sample Amount	: 0
Last Recalib on	: 27 JUL 95 02:46 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-5S;5ml Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-4S	Client Project No.	: MacDill/722450.2102
Lab Sample Number	: X09247	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: 602
Date Prepared	: 7/27/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: BX1072728
		Method Blank No.	: MB1072795

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		73%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

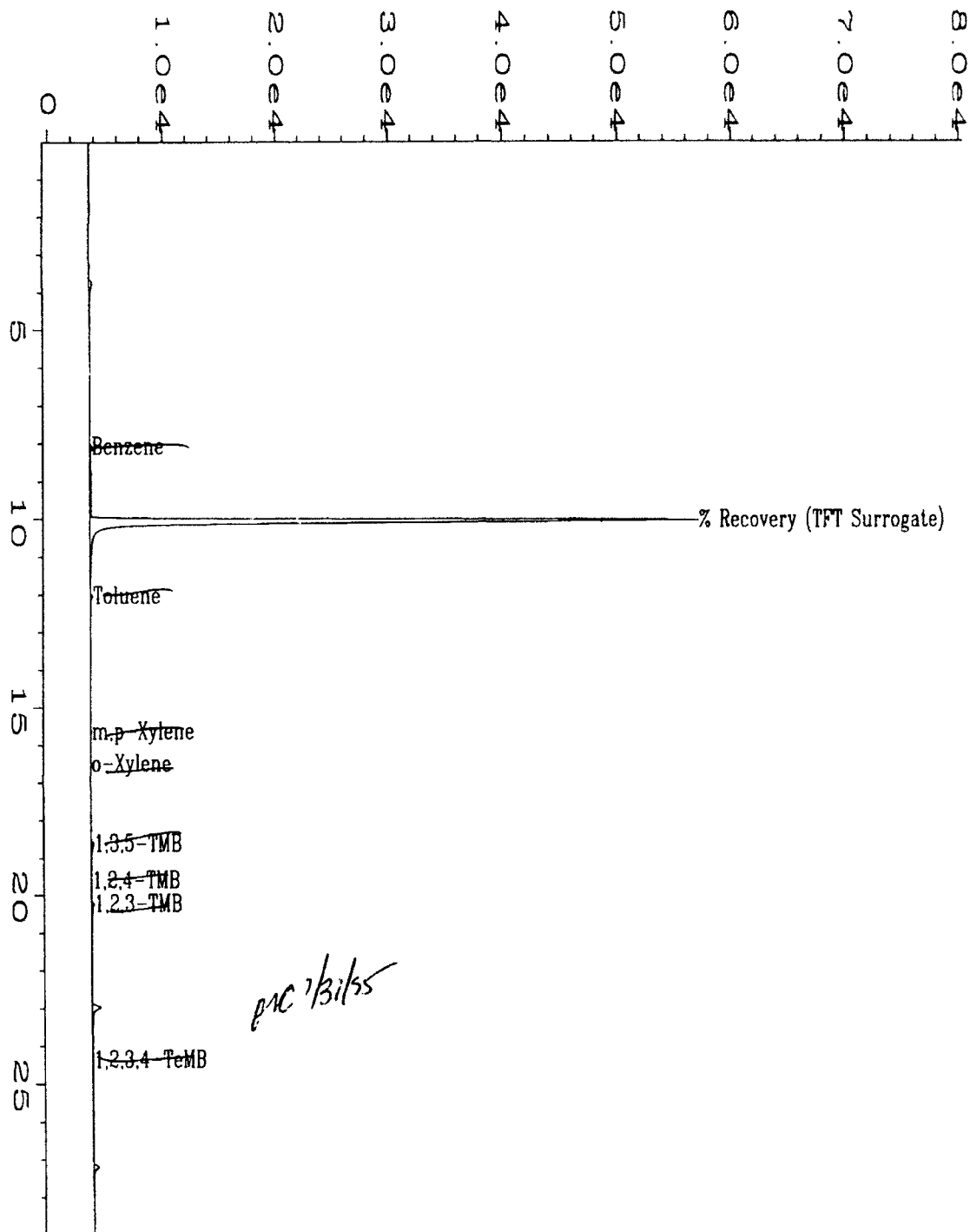
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

BTEX2330.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10727\028F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 28
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09247;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX10727.MTH
Acquired on	: 28 Jul 95 03:18 AM	Analysis Method	: BX10727.MTH
Report Created on:	28 Jul 95 07:55 AM	Sample Amount	: 0
Last Recalib on	: 27 Jul 95 02:46 PM	ISTD Amount	:
Multiplier	: 1		

Client ID: 2472-45

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : 24PZ-2S
Lab Sample Number : X09248
Date Sampled : 7/21/95
Date Received : 7/22/95
Date Prepared : 7/29/95
Date Analyzed : 7/29/95

Client Project No. : MacDill/722450.2102
Lab Project No. : 95-2330
Dilution Factor : 1.00
Method : 602
Matrix : Water
Lab File No. : BX1072909
Method Blank No. : MB1072995

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		82%	70%-130% (QC limits)

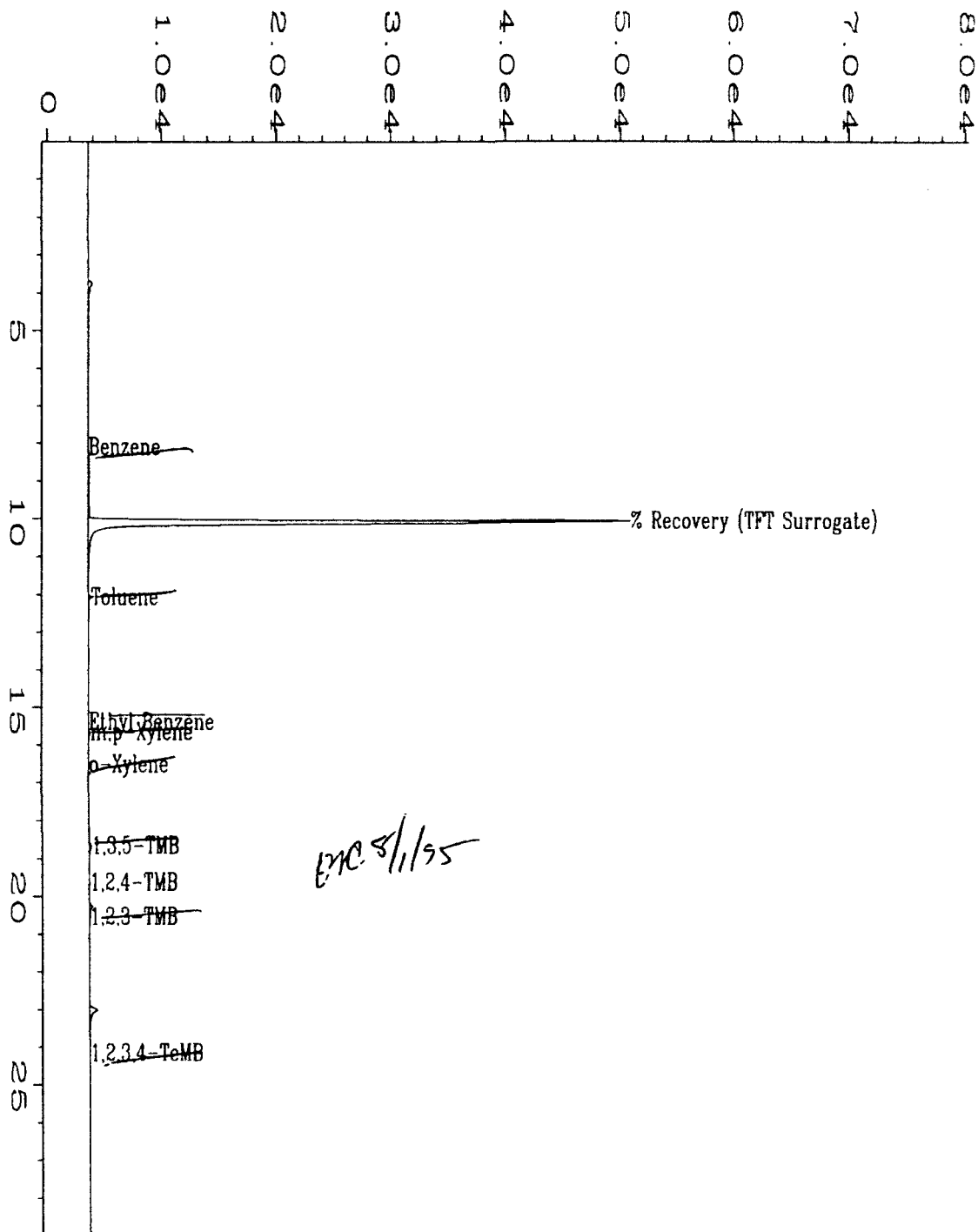
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10729\009F0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 9
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09248;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10728.MTH
quired on	: 29 Jul 95 03:17 PM	Analysis Method	: BX10728.MTH
Report Created on:	30 Jul 95 02:06 PM	Sample Amount	: 0
Last Recalib on	: 29 JUL 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

Client ID: 24P2-2S

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-2R	Client Project No.	: MacDill/722450.21020
Lab Sample Number	: X09249	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: 602
Date Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: BX1072811
		Method Blank No.	: MB1072895

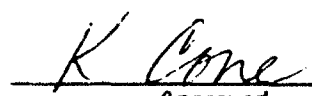
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

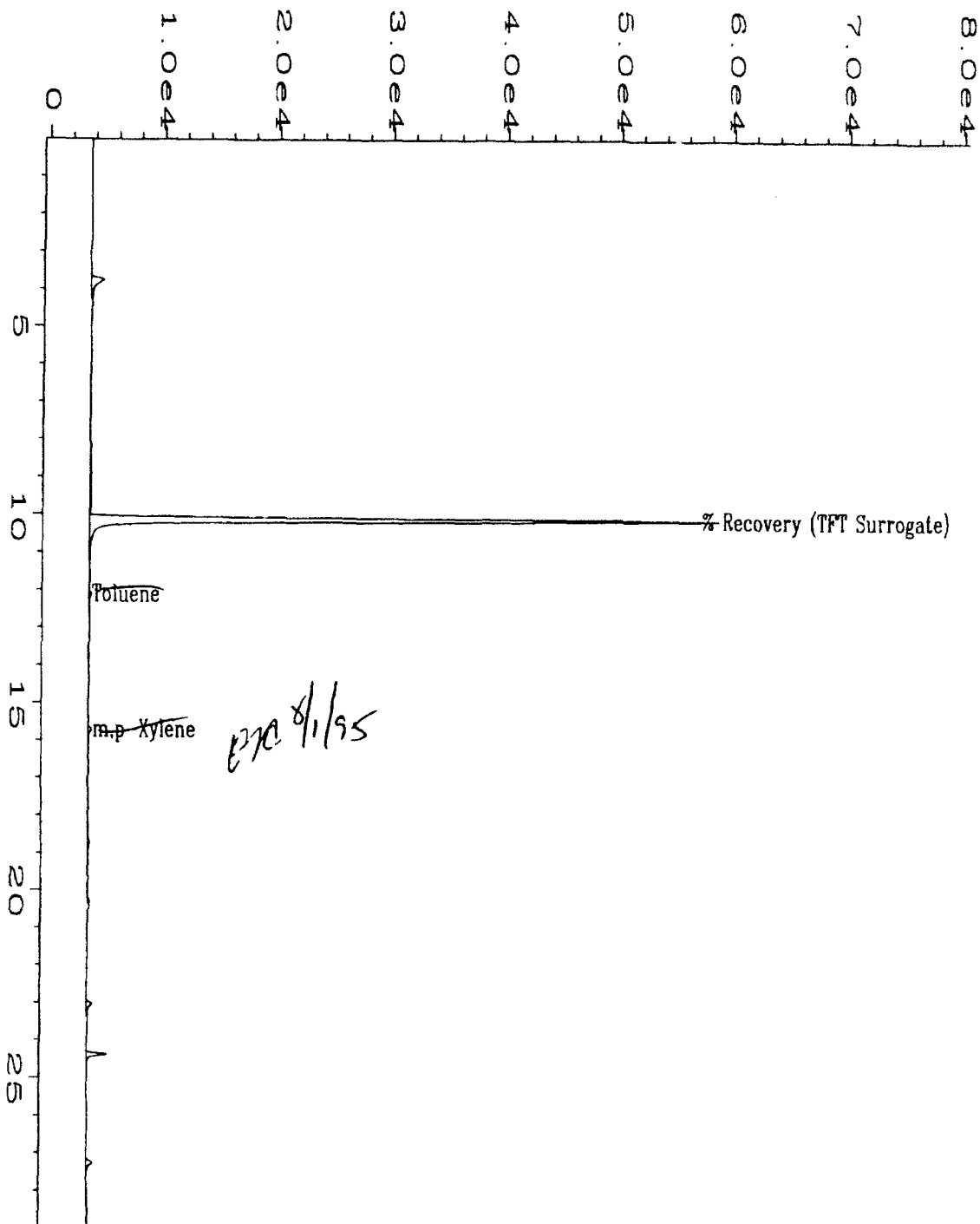
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

BTEX2330.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10728\011F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 11
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09249;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10728.MTH
Acquired on	: 28 Jul 95 03:26 PM	Analysis Method	: BX10728.MTH
Report Created on:	: 01 Aug 95 11:47 AM	Sample Amount	: 0
Last Recalib on	: 29 JUL 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-2R; 5ml water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-E01	Client Project No.	: MacDill/722450.2102
Lab Sample Number	: X09250	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: 602
Date Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: BX1072812
		Method Blank No.	: MB1072895

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		98%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

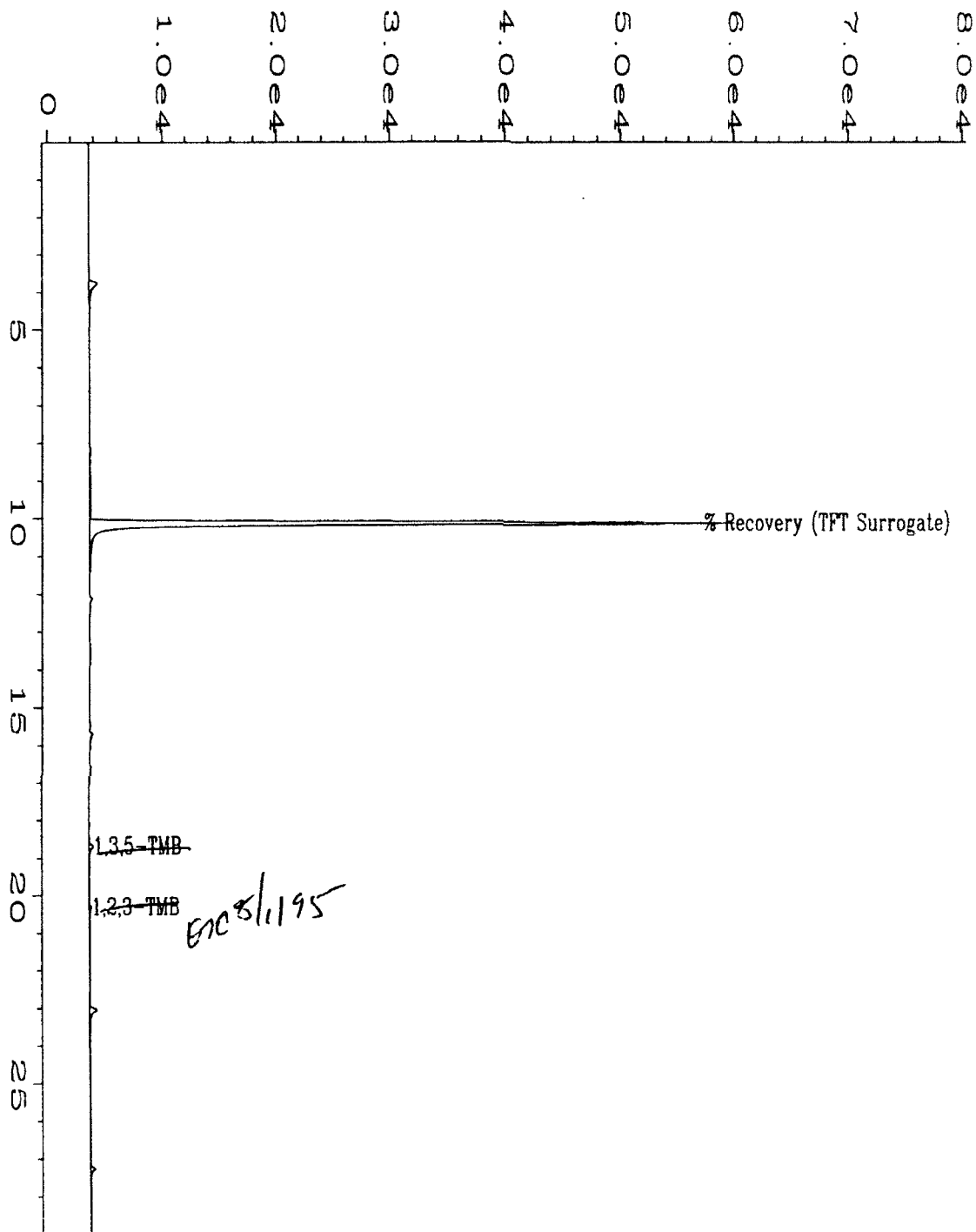
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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BTEX2330.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10728\012F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 12
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09250;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10728.MTH
Required on	: 28 Jul 95 04:07 PM	Analysis Method	: BX10728.MTH
Report Created on	: 29 Jul 95 11:37 AM	Sample Amount	: 0
Last Recalib on	: 29 JUL 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Client ID	: 2472-E01		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-1S	Client Project No.	: MacDill/722450.2102
Lab Sample Number	: X09251	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: 602
Date Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: BX1072813
		Method Blank No.	: MB1072895

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	0.6	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	0.6	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX1072905 for noted value, df = 10, 07/29/95.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

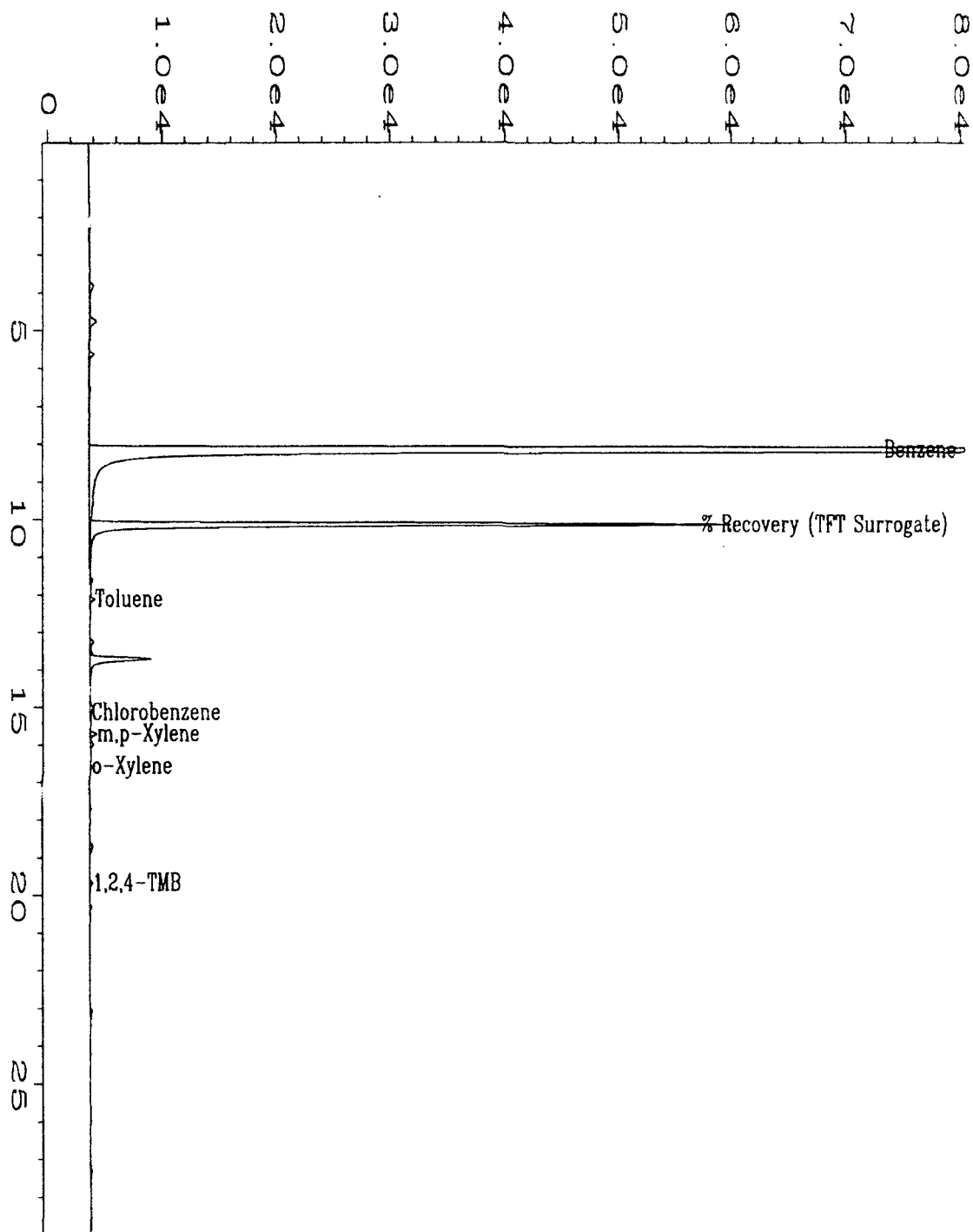
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\1\DATA\BX10728\013F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 13
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09251;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10728.MTH
cquired on	: 28 Jul 95 04:49 PM	Analysis Method	: BX10723.MTH
Report Created on:	: 01 Aug 95 11:47 AM	Sample Amount	: 0
Last Recalib on	: 29 JUL 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-1S; 5 ml water		

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: 24PZ-1S	Client Project No.	: MacDill/722450.2102
Lab Sample Number	: X09251	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 10.00
Date Received	: 7/22/95	Method	: 602
Date Prepared	: 7/29/95	Matrix	: Water
Date Analyzed	: 7/29/95	Lab File No.	: BX1072905
		Method Blank No.	: MB1072995

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	210	4.0
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α -Trifluorotoluene):		92%	70%-130% (QC limits)

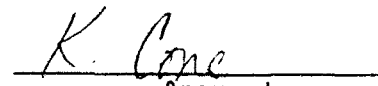
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX1072813 for noted value, df = 1, 07/28/95.

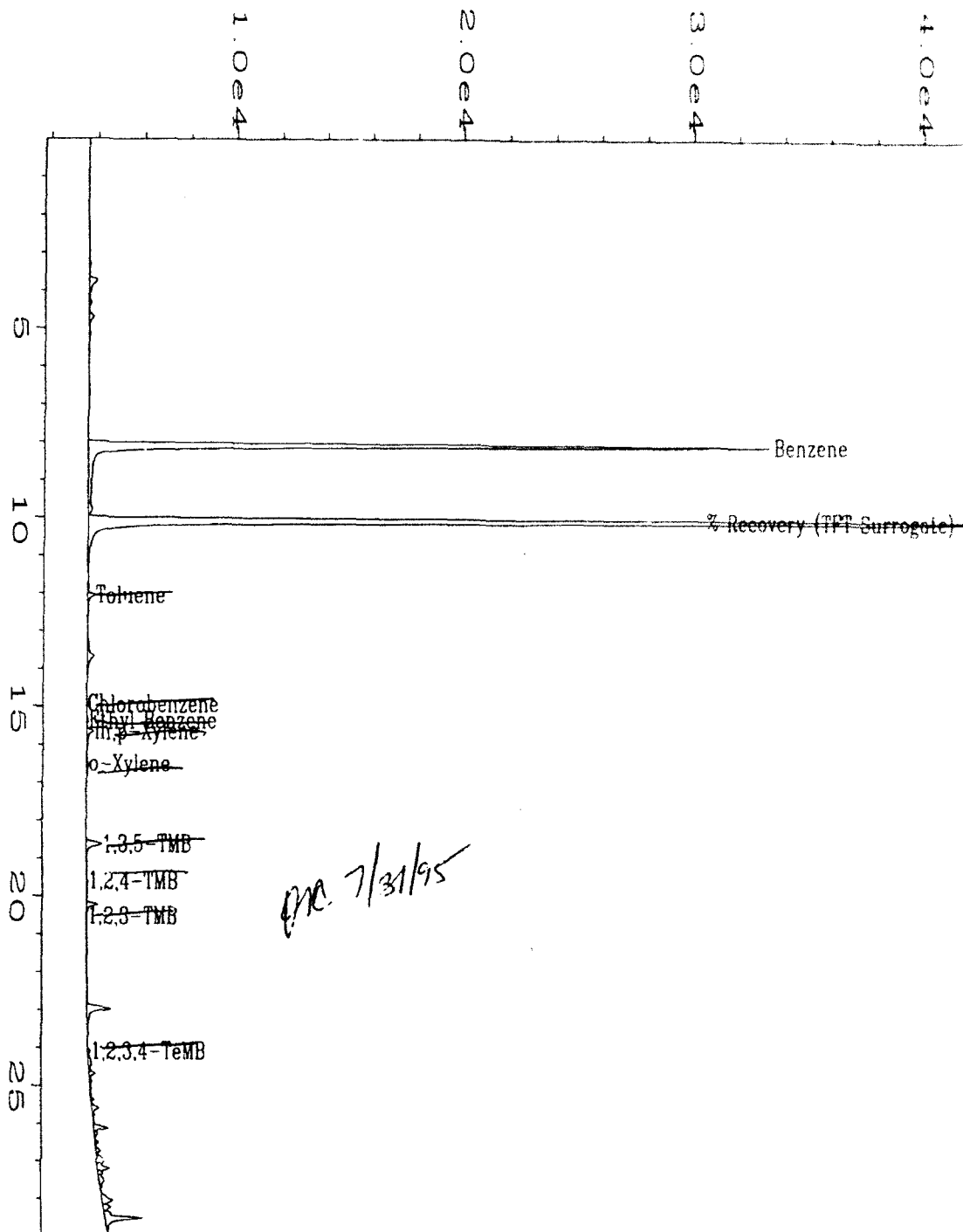
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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BTEX2330.XLS



Data File Name : C:\HPCHEM\1\DATA\BX10729\005F0101.D

Operator : T.Lockwood

Instrument : BTEX1

Sample Name : X09251;10

Run Time Bar Code:

acquired on : 29 Jul 95 12:31 PM

Report Created on: 30 Jul 95 02:04 PM

Last Recalib on : 29 JUL 95 09:09 AM

Multiplier : 1

Client ID : 24P2-15

Page Number : 1

Vial Number : 5

Injection Number : 1

Sequence Line : 1

Instrument Method: BX10728.MTH

Analysis Method : BX10728.MTH

Sample Amount : 0

ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: MacDill/722450.2102
Lab Sample Number	: X09252	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: 602
Date Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: BX1072814
		Method Blank No.	: MB1072895

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5

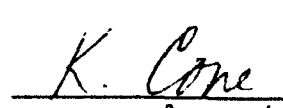
Surrogate Recovery (α,α,α -Trifluorotoluene):	99%	70%-130% (QC limits)
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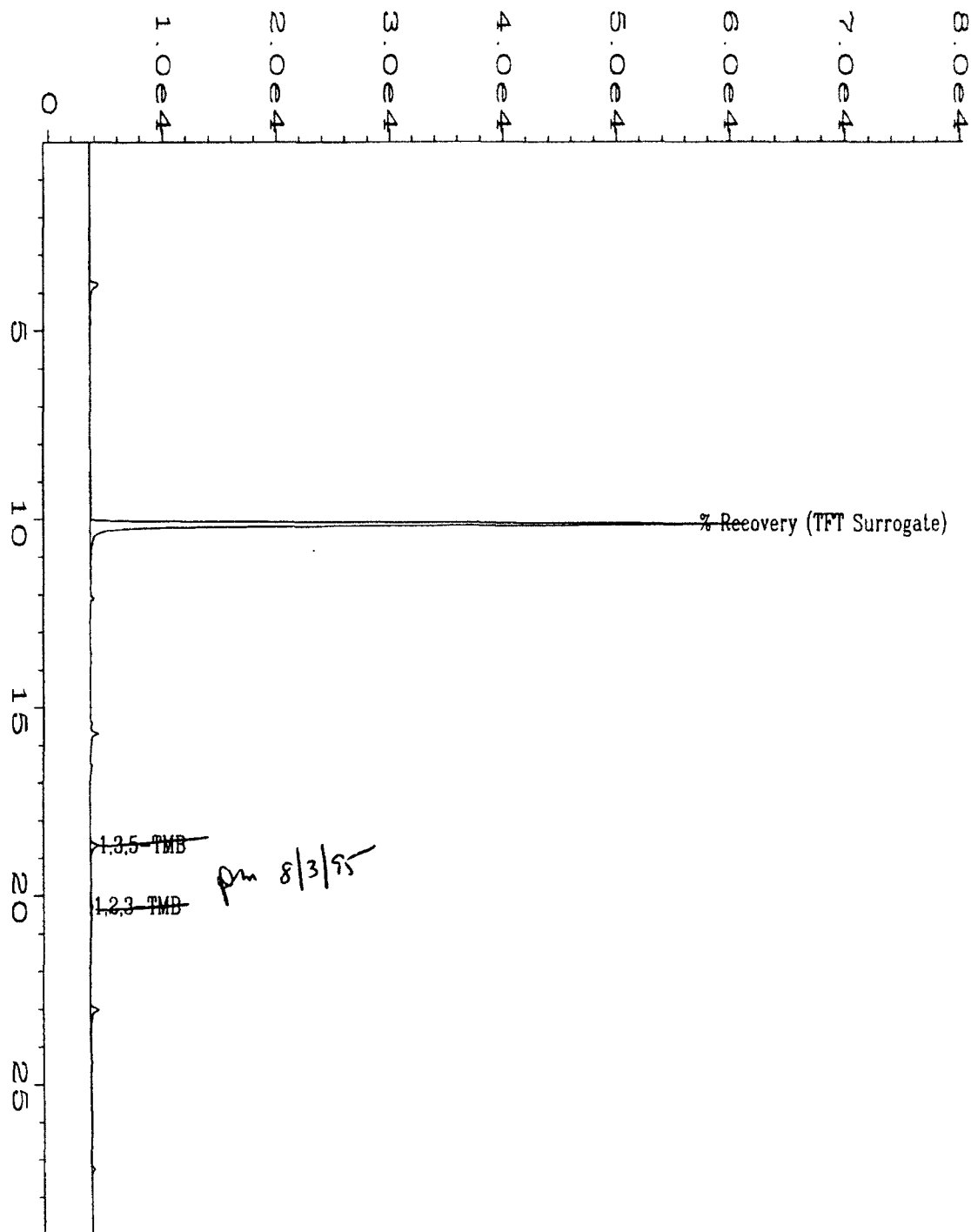
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\1\DATA\BX10728\014F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 14
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09252;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10728.MTH
cquired on	: 28 Jul 95 06:36 PM	Analysis Method	: BX10728.MTH
Report Created on:	29 Jul 95 11:39 AM	Sample Amount	: 0
Last Recalib on	: 29 JUL 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

Client ID : Trip Blank

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 24PZ-3S	Client Project No.	: MacDill/
Lab Sample No.	: X09242	Lab Project No.	: 722450.21020
Date Sampled	: 7/21/95	EPA Method No.	: 95-2330
Date Received	: 7/22/95	Matrix	: 602
Date Prepared	: 7/27/95	Lab File Number(s)	: Water
Date Analyzed	: 7/27/95	Method Blank	: BX1072721,22
		Dilution Factor	: MB1072795
			: 1

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	Concentration (ug/L)		Comments
			MS	MSD	
Benzene	20.0	0.0	14.0	15.1	
Toluene	20.0	0.0	13.9	15.0	
Chlorobenzene	20.0	0.0	13.7	14.8	
Ethylbenzene	20.0	0.0	14.1	15.2	
m,p-Xylene	40.0	0.0	28.6	30.9	
o-Xylene	20.0	0.0	13.9	15.0	
1,3,5-TMB	20.0	0.0	13.8	14.9	
1,2,4-TMB	20.0	0.0	13.2	14.4	
1,2,3-TMB	20.0	0.0	13.6	14.7	
1,2,3,4-TeMB	20.0	0.0	14.2	15.2	
Surrogate	100.0	89%	72%	75%	% RECOVERY

Compound		MS % RECOVERY	MSD % RECOVERY	RPD	QC# Limits		
					RPD	%REC	
Benzene		70.0	75.5	7.6	25	50	150
Toluene		69.5	75.0	7.6	25	50	148
Chlorobenzene		68.5	74.0	7.7	25	55	135
Ethylbenzene		70.5	76.0	7.5	25	50	150
m,p-Xylene		71.5	77.3	7.7	25	50	150
o-Xylene		69.5	75.0	7.6	25	50	150
1,3,5-TMB		69.0	74.5	7.7	25	50	150
1,2,4-TMB		66.0	72.0	8.7	25	50	150
1,2,3-TMB		68.0	73.5	7.8	25	50	150
1,2,3,4-TeMB		71.0	76.0	6.8	25	50	150
Surrogate		72.0	75.0	NA	NA	70	130

= Values taken from EPA methods 602/8020.

* = Values outside of QC limits.

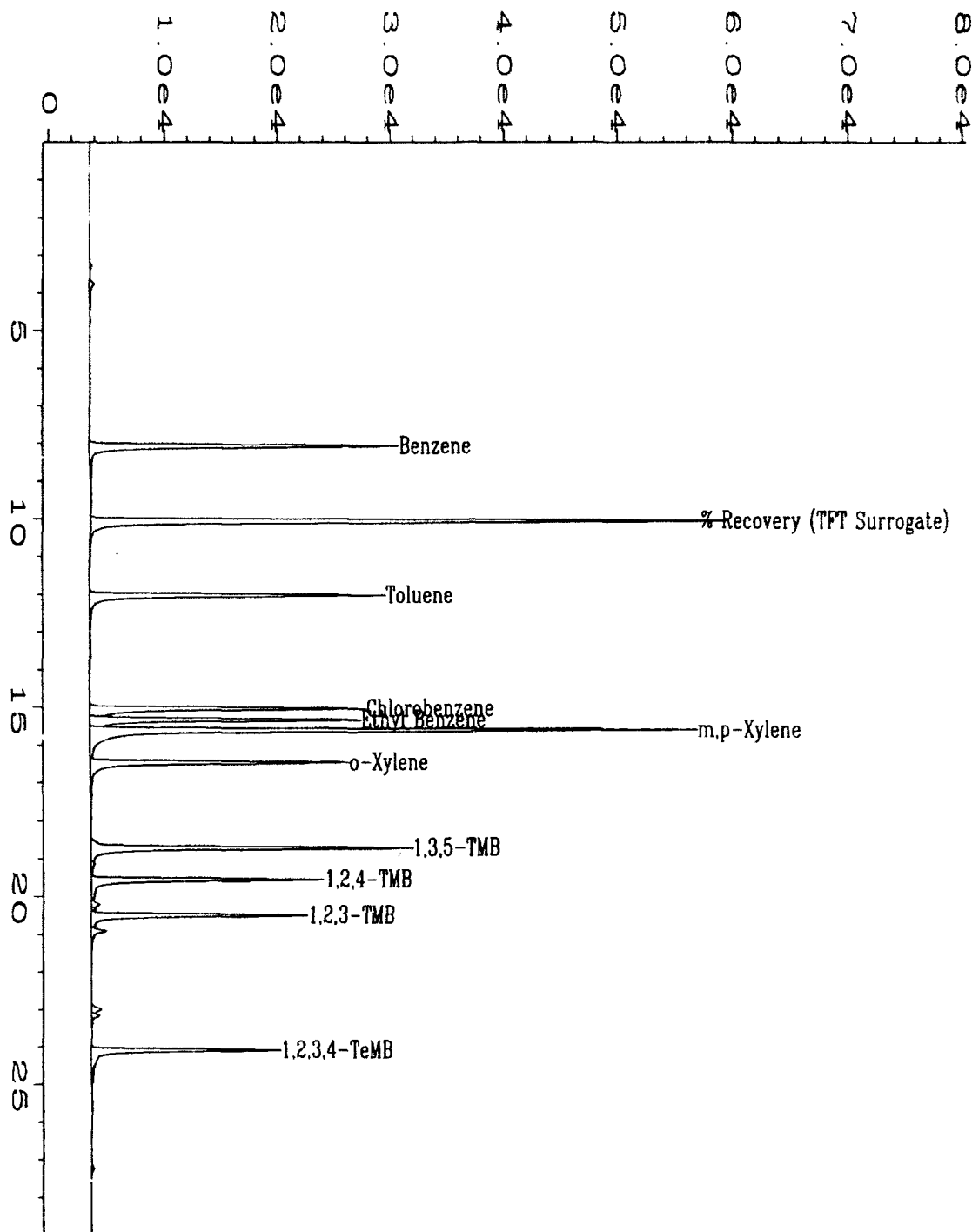
RPD: 0 out of (10) outside limits.

Spike Recovery: 0 out of (20) outside limits.

Comments:

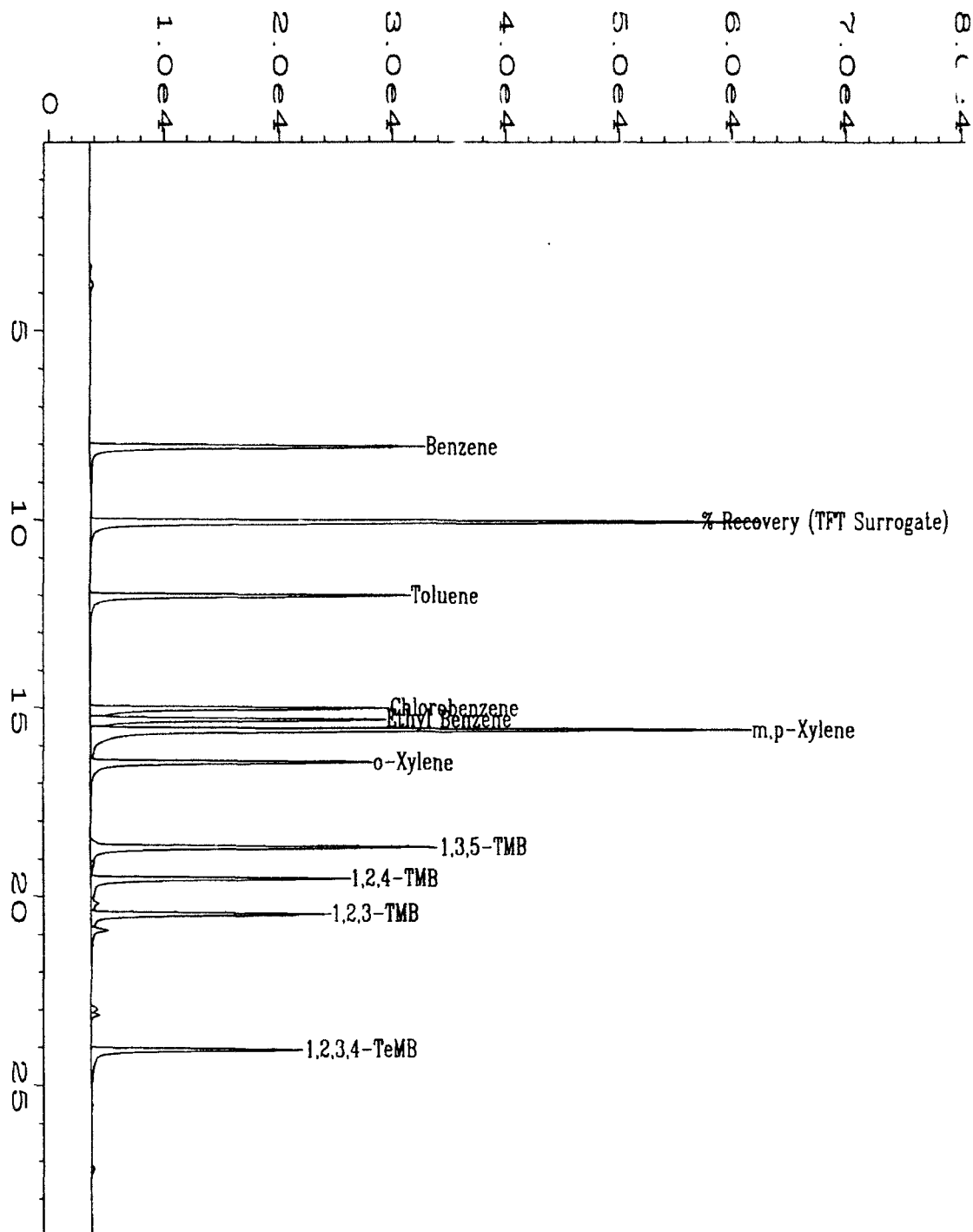
Analyst

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Data File Name	: C:\HPCHEM\1\DATA\BX10727\021F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 21
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X09242MS	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10727.MTH
Acquired on	: 27 Jul 95 10:28 PM	Analysis Method	: BX10727.MTH
Report Created on	: 01 Aug 95 11:12 AM	Sample Amount	: 0
Last Recalib on	: 27 JUL 95 02:46 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 20 ppb Matrix Spike- Std. #1727		

Client ID : 24P2-35



Data File Name : C:\HPCHEM\1\DATA\BX10727\022F0801.D
 Operator : S.W. Tyson Page Number : 1
 Instrument : BTEX1 Vial Number : 22
 Sample Name : X09242MSD Injection Number : 1
 Run Time Bar Code: Sequence Line : 8
 Acquired on : 27 Jul 95 11:09 PM Instrument Method: BX107 M
 Report Created on: 01 Aug 95 11:12 AM Analysis Method : BX10727.M
 Last Recalib on : 27 JUL 95 02:46 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :
 Sample Info : 20 ppb Spike Duplicate- Std. # 1727

Client ID: 04PZ-35

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St.
Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number : LC S1072795
Date Extracted/Prepared : 7/27/95
Date Analyzed : 7/27/95
Spike Amount (ug/L) : 20.0

Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1072710

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.4	92.0	68-111*
Toluene	108-88-3	19.4	97.0	71-111*
Chlorobenzene	108-90-7	20.1	100.5	65-115*
Ethyl Benzene	100-41-4	20.2	101.0	75-115*
m,p-Xylene	108-38-3	21.3	106.5	74-113*
o-Xylene	106-42-3	19.4	97.0	65-115*
1,3,5-Trimethylbenzene	95-47-6	21.5	107.5	69-109*
1,2,4-Trimethylbenzene	108-67-8	21.8	109.0	68-110*
1,2,3-Trimethylbenzene	95-63-6	24.7	123.5	71-127*
1,2,3,4-Tetramethylbenzene	526-73-8	21.5	107.5	65-115*
Surrogate Recovery (α,α,α -Trifluorotoluene):		97%	70%-130% (QC limits)	

NOTES:

* = Limits established 7/5/95 KSC

QUALIFIERS:

E = Extrapolated value. Value exceeds that of the calibration range.

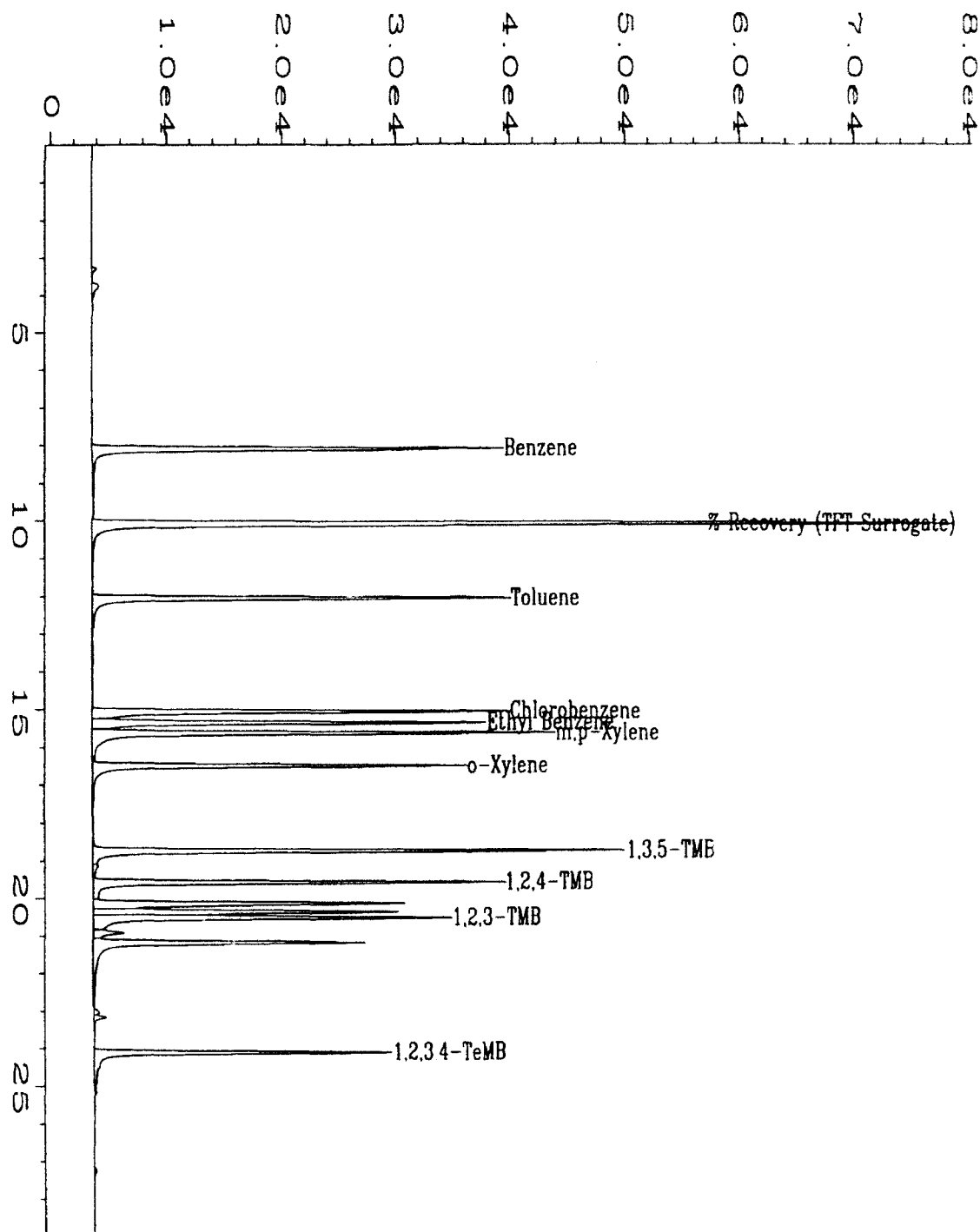
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

NA = Not available/Not analyzed.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10727\010F0801.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 10
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: LCS1072795	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX107: IT
Acquired on	: 27 Jul 95 02:51 PM	Analysis Method	: BX1072: MT
Report Created on:	01 Aug 95 11:11 AM	Sample Amount	: 0
Last Recalib on	: 27 JUL 95 02:46 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Std. # 1667		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St.
Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS1072895
Date Extracted/Prepared : 7/28/95
Date Analyzed : 7/28/95
Spike Amount (ug/L) : 20.0

Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX10728008

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.9	89.5	68-111*
Toluene	108-88-3	19.6	98.0	71-111*
Chlorobenzene	108-90-7	20.0	100.0	65-115*
Ethyl Benzene	100-41-4	20.0	100.0	75-115*
m,p-Xylene	108-38-3	20.6	103.0	74-113*
	106-42-3			
o-Xylene	95-47-6	19.4	97.0	65-115*
1,3,5-Trimethylbenzene	108-67-8	21.9	109.5#	69-109*
1,2,4-Trimethylbenzene	95-63-6	22.0	110.0	68-110*
1,2,3-Trimethylbenzene	526-73-8	24.6	123.0	71-127*
1,2,3,4-Tetramethylbenzene	488-23-3	23.0	115.0	65-115*
Surrogate Recovery (α,α,α -Trifluorotoluene):		100%	70%-130% (QC limits)	

NOTES: # = Value outside QC limits, but all samples associated with this LCS are non-detect for this compound.

* = Limits established 7/5/95 KSC

QUALIFIERS:

E = Extrapolated value. Value exceeds that of the calibration range.

U = Compound analyzed for, but not detected.

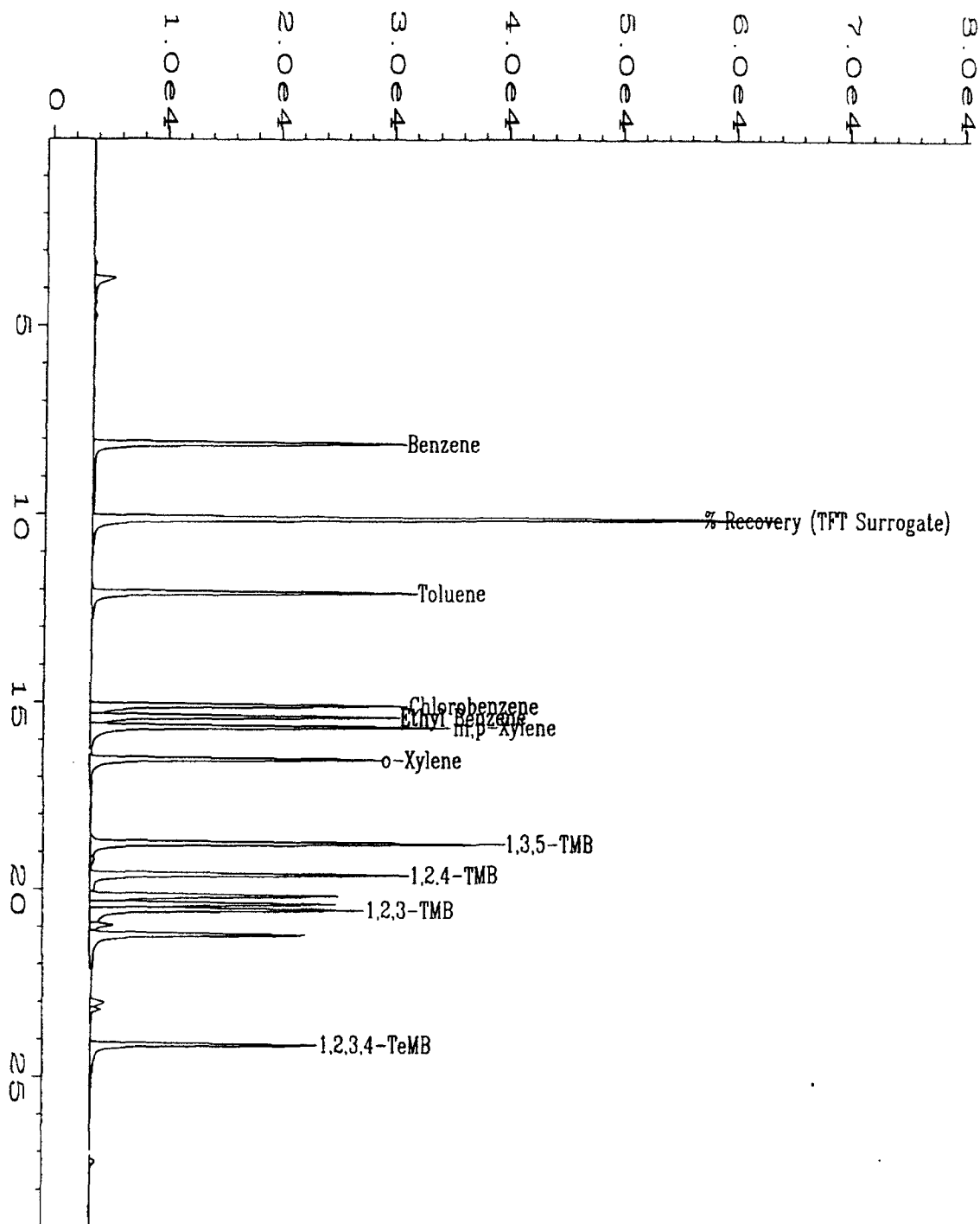
B = Compound found in blank and sample. Compare blank and sample data.

NA = Not available/Not analyzed.

Analyst

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LCS10728.XLS; 8/3/95



Data File Name : C:\HPCHEM\1\DATA\BX10728\008F0801.D

Operator : S.W. Tyson

Instrument : BTEX1

Sample Name : LCS2072895

Run Time Bar Code:

Acquired on : 28 Jul 95 01:21 PM

Report Created on: 28 Jul 95 01:52 PM

Last Recalib on : 28 Jul 95 12:43 PM

Multiplier : 1

Page Number : 1

Vial Number : 8

Injection Number : 1

Sequence Line : 8

Instrument Method: BX10728 H

Analysis Method : BX10728.MTH

Sample Amount : 0

ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St.
Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS1072995 Dilution Factor : 1.00
Date Extracted/Prepared : 7/29/95 Method : 602/8020
Date Analyzed : 7/29/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX1072902

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.2	81.0	68-111*
Toluene	108-88-3	17.1	85.5	71-111*
Chlorobenzene	108-90-7	17.8	89.0	65-115*
Ethyl Benzene	100-41-4	17.8	89.0	75-115*
m,p-Xylene	108-38-3	17.9	89.5	74-113*
	106-42-3			
o-Xylene	95-47-6	17.0	85.0	65-115*
1,3,5-Trimethylbenzene	108-67-8	19.4	97.0	69-109*
1,2,4-Trimethylbenzene	95-63-6	19.3	96.5	68-110*
1,2,3-Trimethylbenzene	526-73-8	21.8	109.0	71-127*
1,2,3,4-Tetramethylbenzene	488-23-3	20.0	100.0	65-115*
Surrogate Recovery (α,α,α -Trifluorotoluene):		85%	70%-130% (QC limits)	

NOTES:

* = Limits established 7/5/95 KSC

QUALIFIERS:

E = Extrapolated value. Value exceeds that of the calibration range.

U = Compound analyzed for, but not detected.

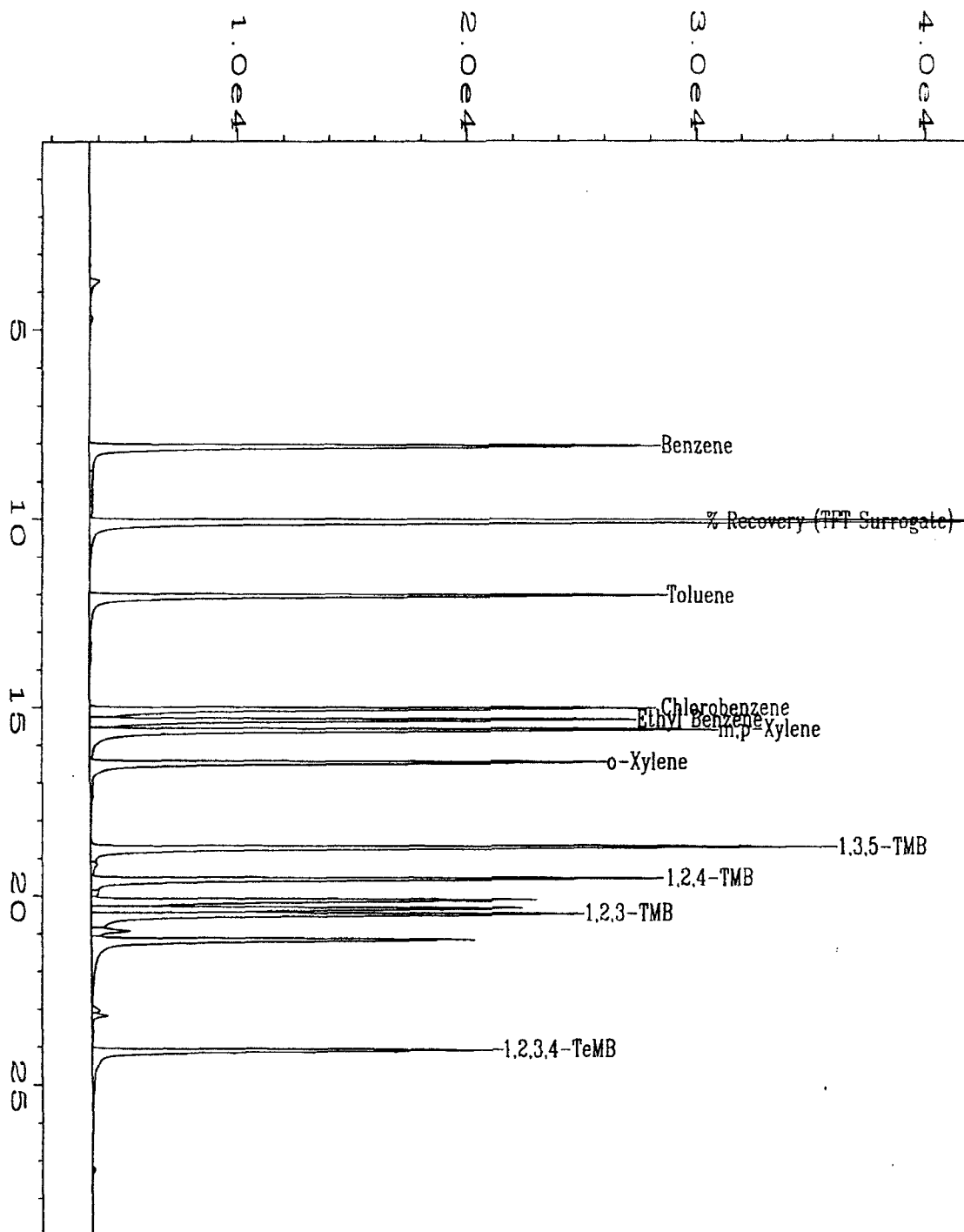
B = Compound found in blank and sample. Compare blank and sample data.

NA = Not available/Not analyzed.


Analyst


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LCS10729. <LS; 8/1/95



Data File Name	: C:\HPCHEM\1\DATA\BX10729\002F0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 2
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: LCS2072995	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX10728. A
Acquired on	: 29 Jul 95 10:27 AM	Analysis Method	: BX10728.MTH
Report Created on:	30 Jul 95 12:36 PM	Sample Amount	: 0
Last Recalib on	: 29 JUL 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021


Methane Report Form
Method Blank Report

Method Blank Number	: GB072895	Client Project No.	: MacDill/722450.21020
Date Extracted/Prepared	: 7/28/95	Lab Project No.	: 95-2330
Date Analyzed	: 7/28/95	Dilution Factor	: 1.00
		Method	: RSKSOP-175
		Matrix	: Water
		Lab File No.	: GAS0728002

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

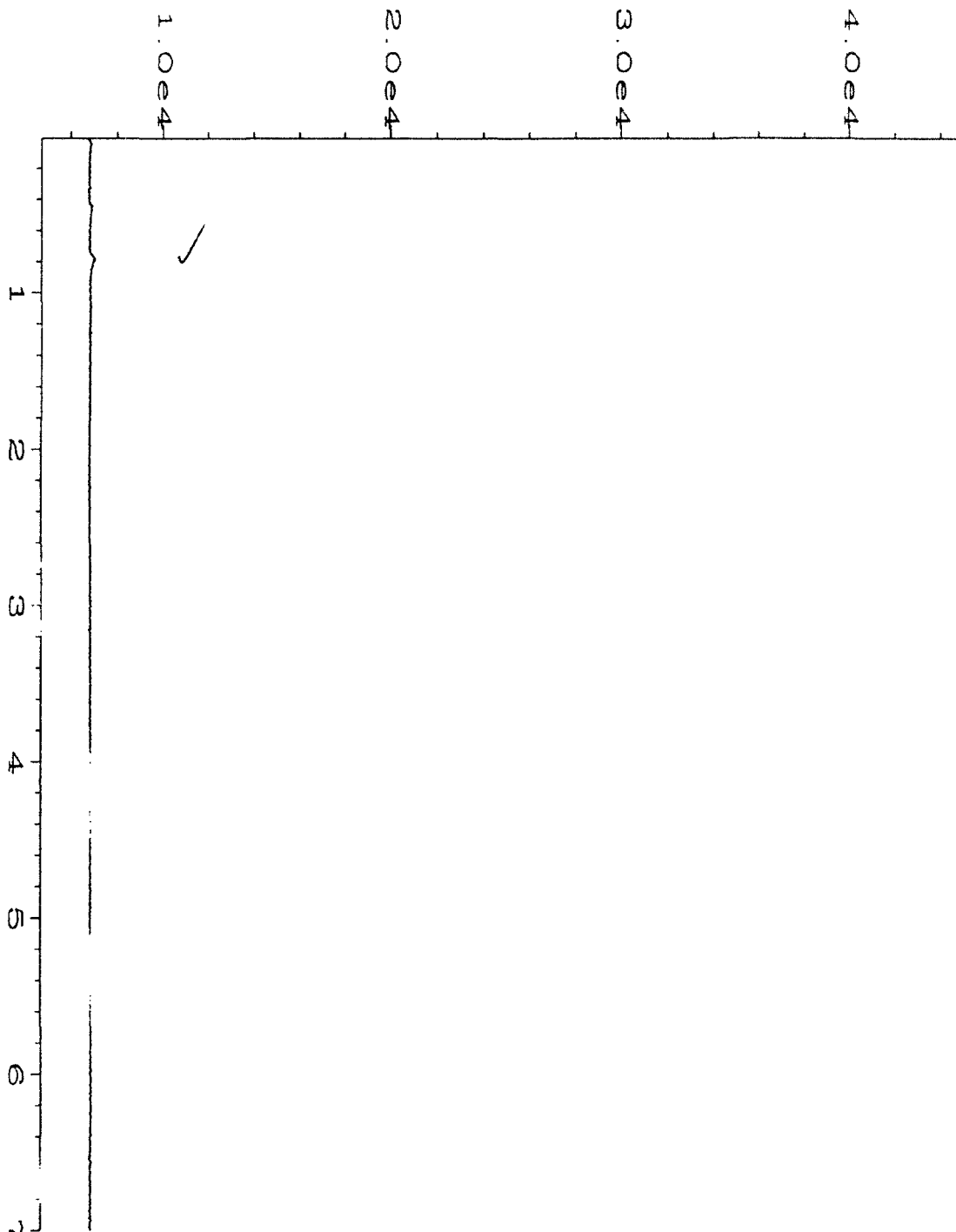
QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

AF2330.XLS



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\002R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 2
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: GB072895	Sequence Line	: 1
Run Time Bar Code		Instrument Method	: GASES.M
Acquired on	: 28 Jul 95 06:56 AM	Analysis Method	: METH0728.MT
Report Created on	: 01 Aug 95 11:53 AM	Sample Amount	: 0
Last Calibration	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplexer	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: 24PZ-3S	Client Project No.	: MacDill/722450.21020
Lab Sample Number	: X09242	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 10.00
Date Received	: 7/22/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: GAS0728011


Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.21	0.04

Temperature	: 74.3 F	Saturation Meth	: 0.051042584
Amount Injected	: 0.05 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 0.16013086
Head space created	: 4 ml	in Head Space	
Methane Area	: 118.697 ug		

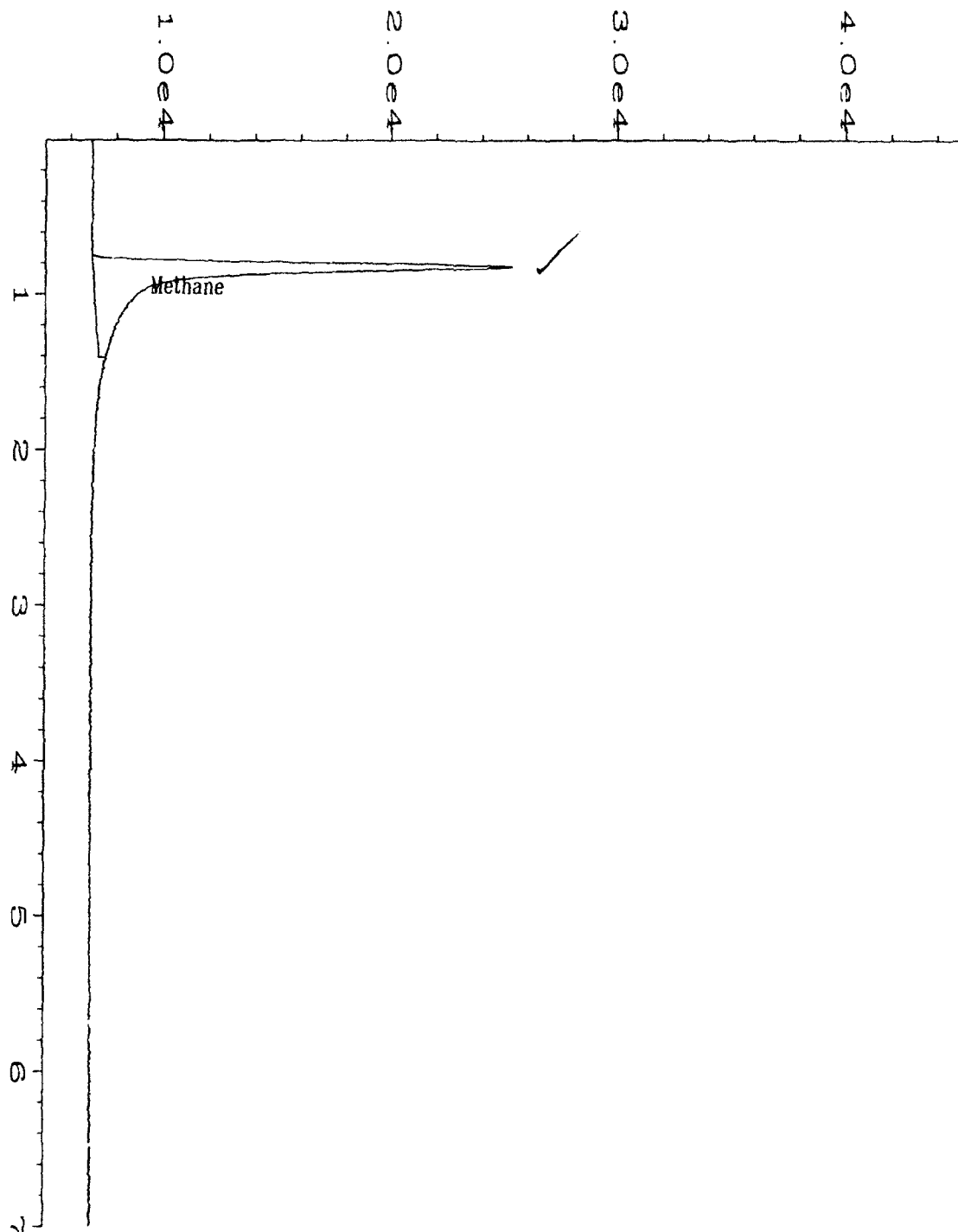
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\GAS0728\011R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 11
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09242;10	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES. i
Acquired on	: 28 Jul 95 11:06 AM	Analysis Method	: METH0728.M
Report Created on:	: 01 Aug 95 11:54 AM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-3S;Water(inject 50 ul)		

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(303) 425-6021

Methane Report Form

Client Sample Number	: 24PZ-3D	Client Project No.	: MacDill/722450.21020
Lab Sample Number	: X09245	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: GAS0728014

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.020	0.004

Temperature	: 75.9 F	Saturation	Meth	0.004814293
Amount Injected	: 0.5 ml	Concentration		
Total Volume of Sample	: 43 ml	Concentration	Meth	0.015058263
Head space created	: 4 ml	in Head Space		
Methane Area	: 111.954 ug			

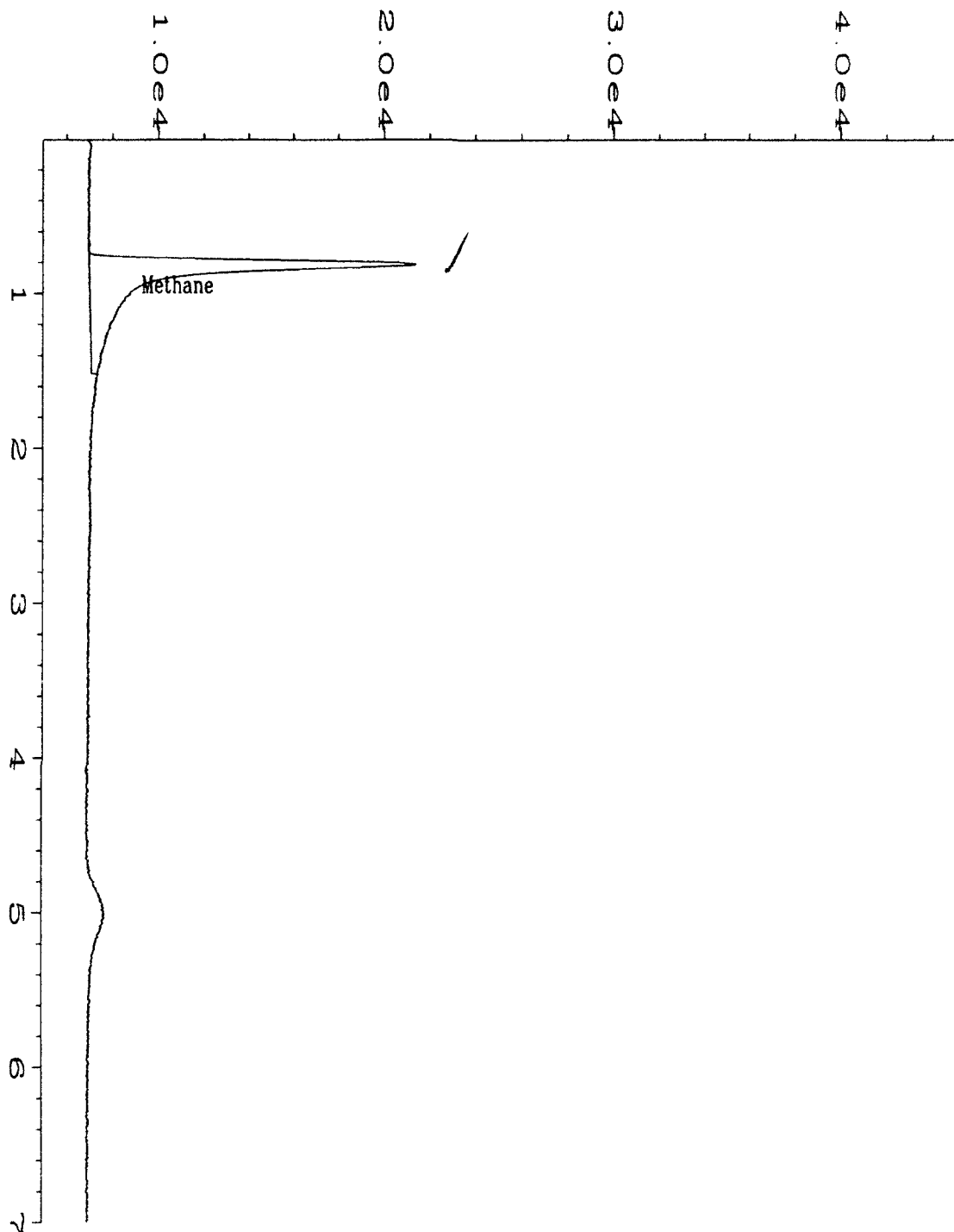
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\014R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 14
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09245;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES H
Acquired on	: 28 Jul 95 11:55 AM	Analysis Method	: METH0728.M
Report Created on	: 01 Aug 95 11:54 AM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-3D;Water(inject 500 ul)		

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

Methane Report Form

Client Sample Number	: 24PZ-5S	Client Project No.	: MacDill/722450.21020
Lab Sample Number	: X09246	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 10.00
Date Received	: 7/22/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: GAS0728015

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.34	0.04

Temperature	: 75.4 F	Saturation Meth	: 0.082642483
Amount Injected	: 0.05 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 0.258732835
Head space created	: 4 ml	in Head Space	
Methane Area	: 192.181 ug		

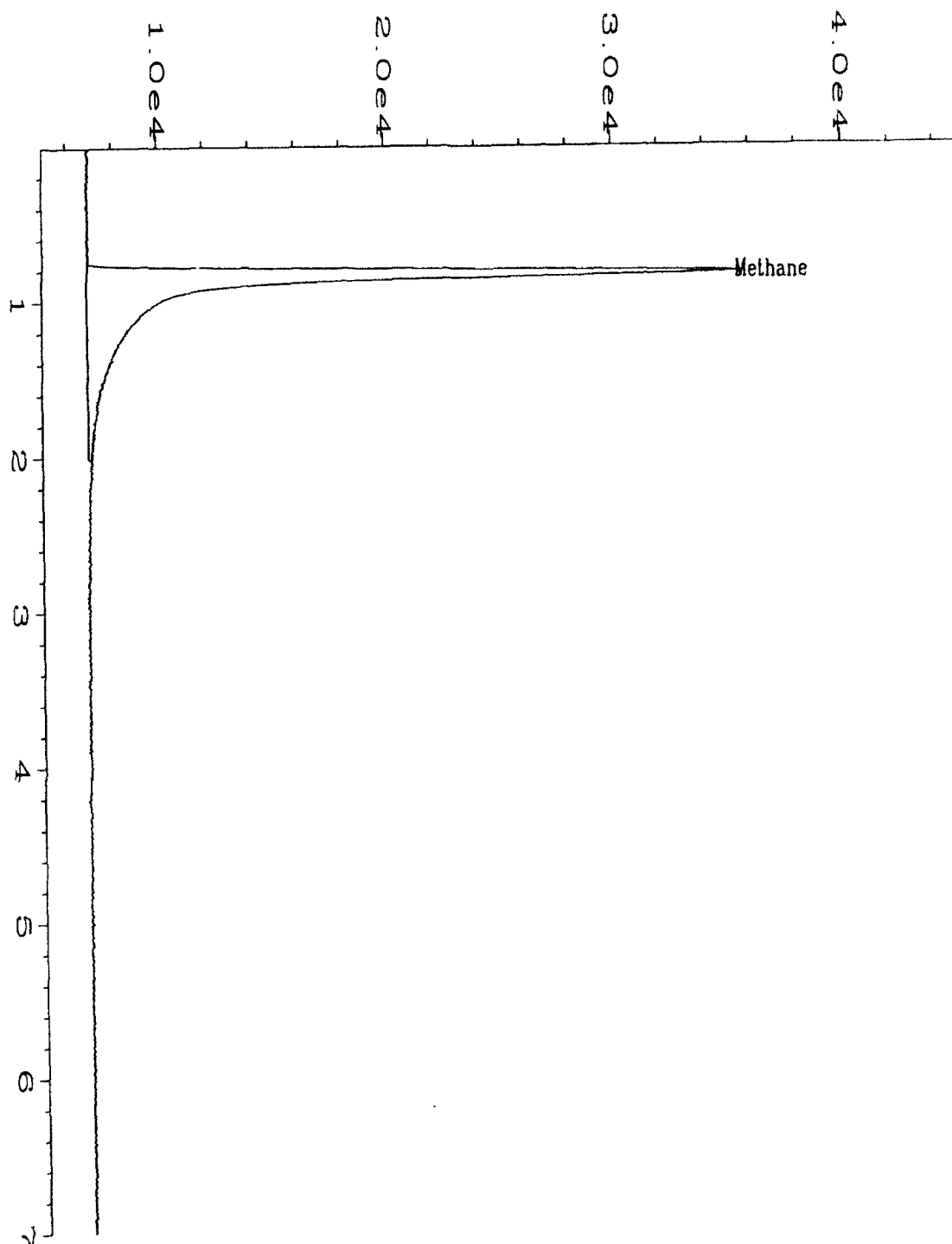
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\015R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 15
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09246;10	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	GASES H
Acquired on	: 28 Jul 95 12:02 PM	Analysis Method	: METH0728.M
Report Created on:	01 Aug 95 02:22 PM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-5S;Water(inject 50 ul)		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: 24PZ-4S	Client Project No.	: MacDill/722450.21020
Lab Sample Number	: X09247	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: GAS0728016

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.033	0.004

Temperature	: 76.5 F	Saturation Meth	: 0.008066953
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 0.025203762
Head space created	: 4 ml	in Head Space	
Methane Area	: 187.593 ug		

Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

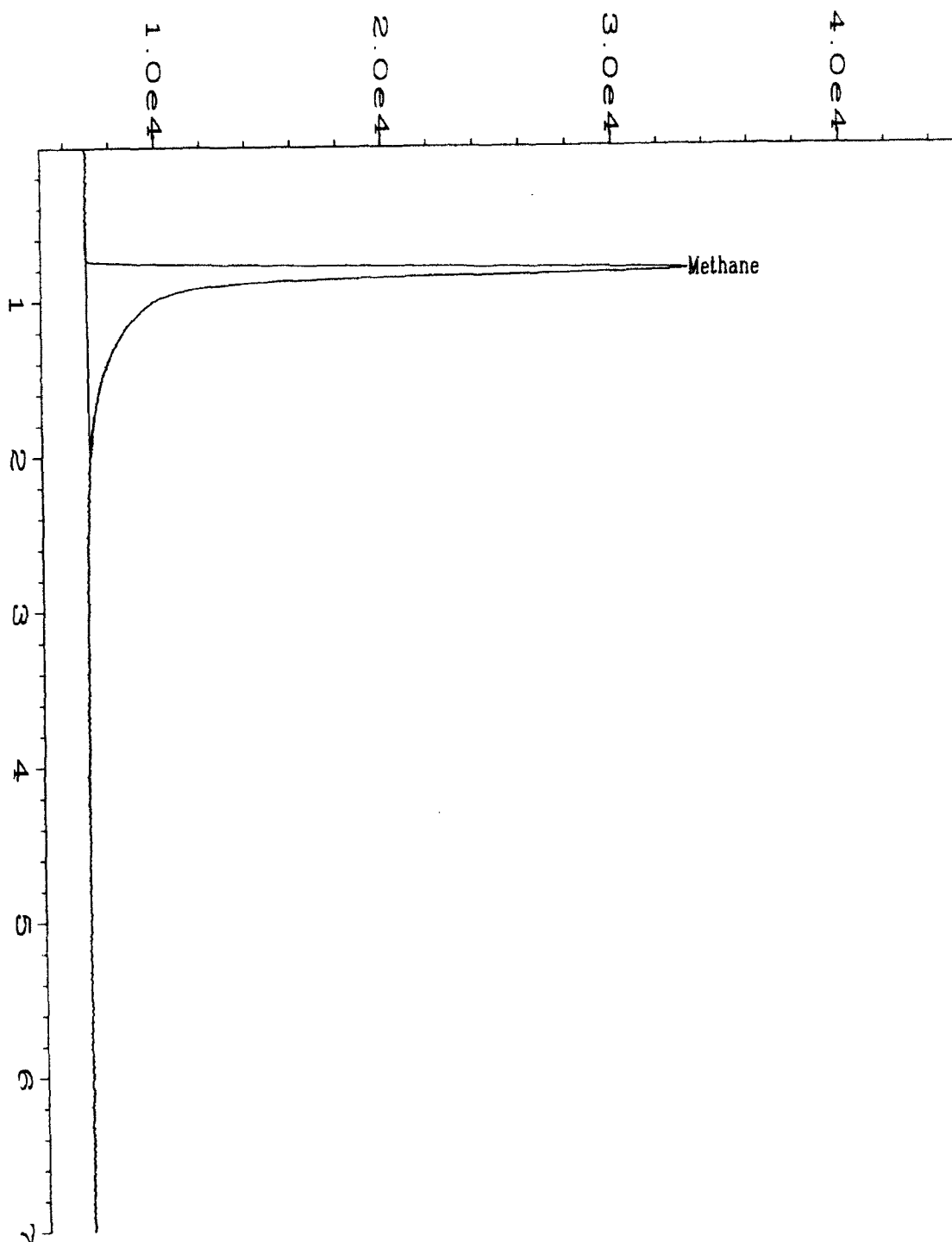
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\016R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 16
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09247;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	GASES H
Acquired on	: 28 Jul 95 12:13 PM	Analysis Method	: METH0728.M
Report Created on:	01 Aug 95 02:22 PM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-4S;Water(inject 500 ul)		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: 24PZ-2S	Client Project No.	: MacDill/722450.21020
Lab Sample Number	: X09248	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: GAS0728017

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.008	0.004

Temperature	: 76.5 F	Saturation Meth	: 0.00200301
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 0.006258048
Head space created	: 4 ml	in Head Space	
Methane Area	: 46.579 ug		

Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

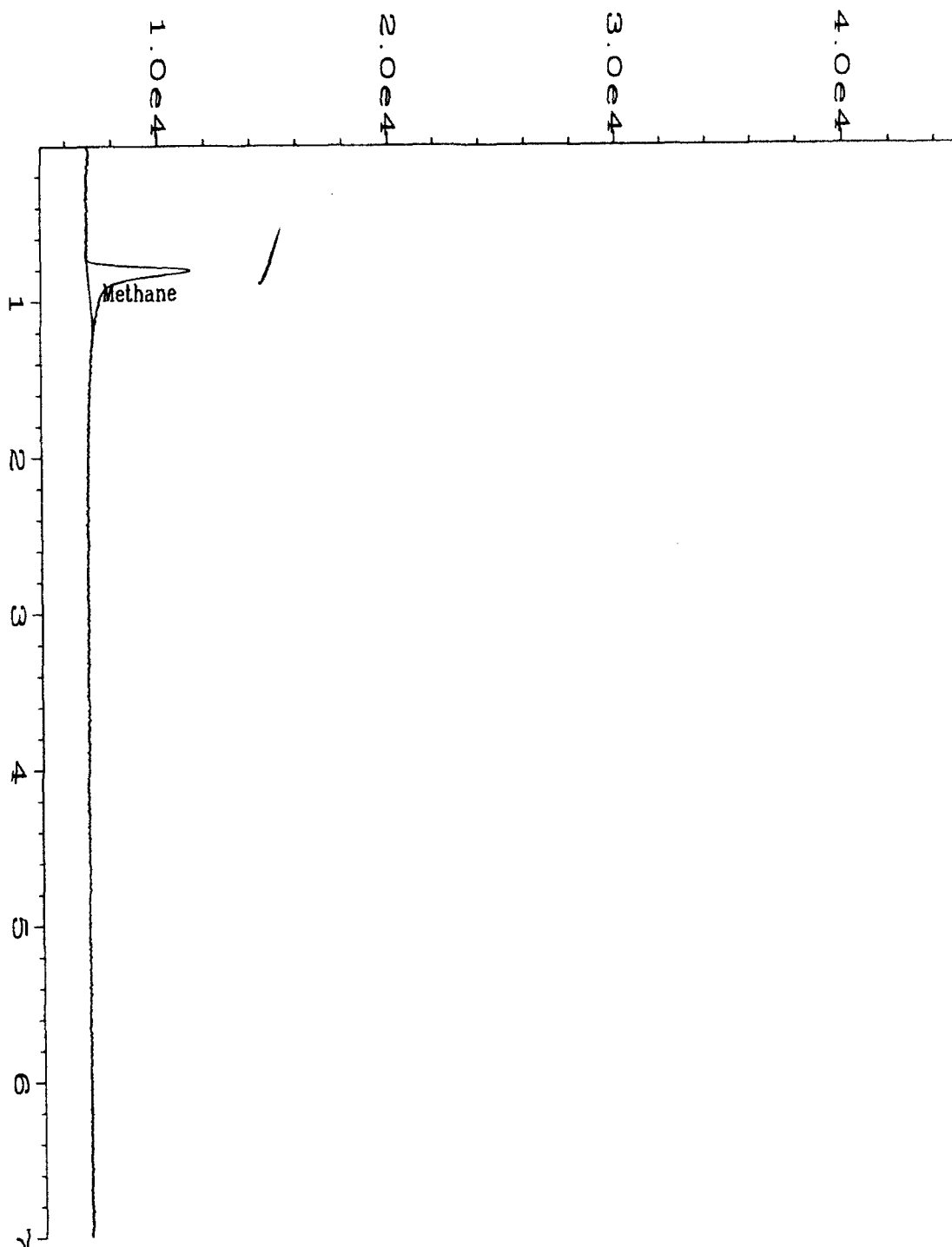
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\GAS0728\017R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 17
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09248;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES. A
Acquired on	: 28 Jul 95 12:34 PM	Analysis Method	: METH0728.M
Report Created on:	: 01 Aug 95 11:54 AM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-2S;Water(inject 500 ul)		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: 24PZ-2R	Client Project No.	: MacDill/722450.21020
Lab Sample Number	: X09249	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 1.00
Date Received	: 7/22/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: GAS0728013

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.009	0.004

Temperature	: 77.1 F	Saturation Meth	: 0.002197037
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 0.006856574
Head space created	: 4 ml	in Head Space	
Methane Area	: 51.091 ug		

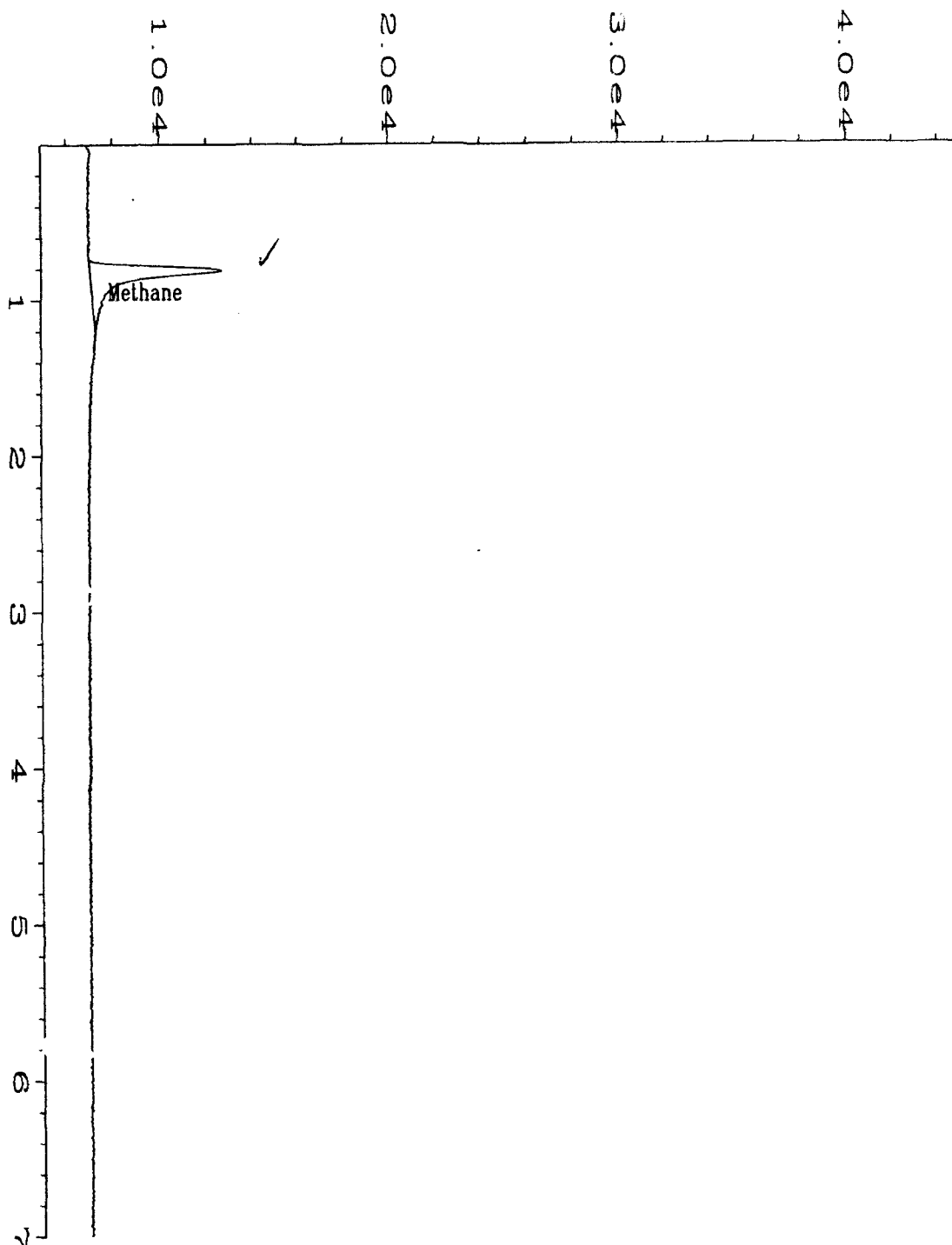
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\018R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 18
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09249;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES H
Acquired on	: 28 Jul 95 12:59 PM	Analysis Method	: METH0728.M
Report Created on:	01 Aug 95 11:54 AM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-2R;Water(inject 500 ul)		

EVERGREEN ANALYTICAL, INC.
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Methane Report Form

Client Sample Number	: 24PZ-1S	Client Project No.	: MacDill/722450.21020
Lab Sample Number	: X09251	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	Dilution Factor	: 50.00
Date Received	: 7/22/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/28/95	Matrix	: Water
Date Analyzed	: 7/28/95	Lab File No.	: GAS0728020

Compound Name	Cas Number	Sample Concentration mg/L	RL ng/L
Methane	74-82-8	3.1	0.2

Temperature	: 78.4 F	Saturation Meth	: 0.750164339
Amount Injected	: 0.01 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 2.335474898
Head space created	: 4 ml	in Head Space	
Methane Area	: 348.894 ug		

Atomic weight(Methane) : 16 g

QUALIFIERS:

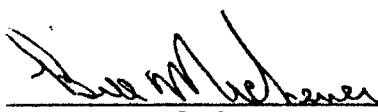
E = Extrapolated value.

U = Compound analyzed for, but not detected.

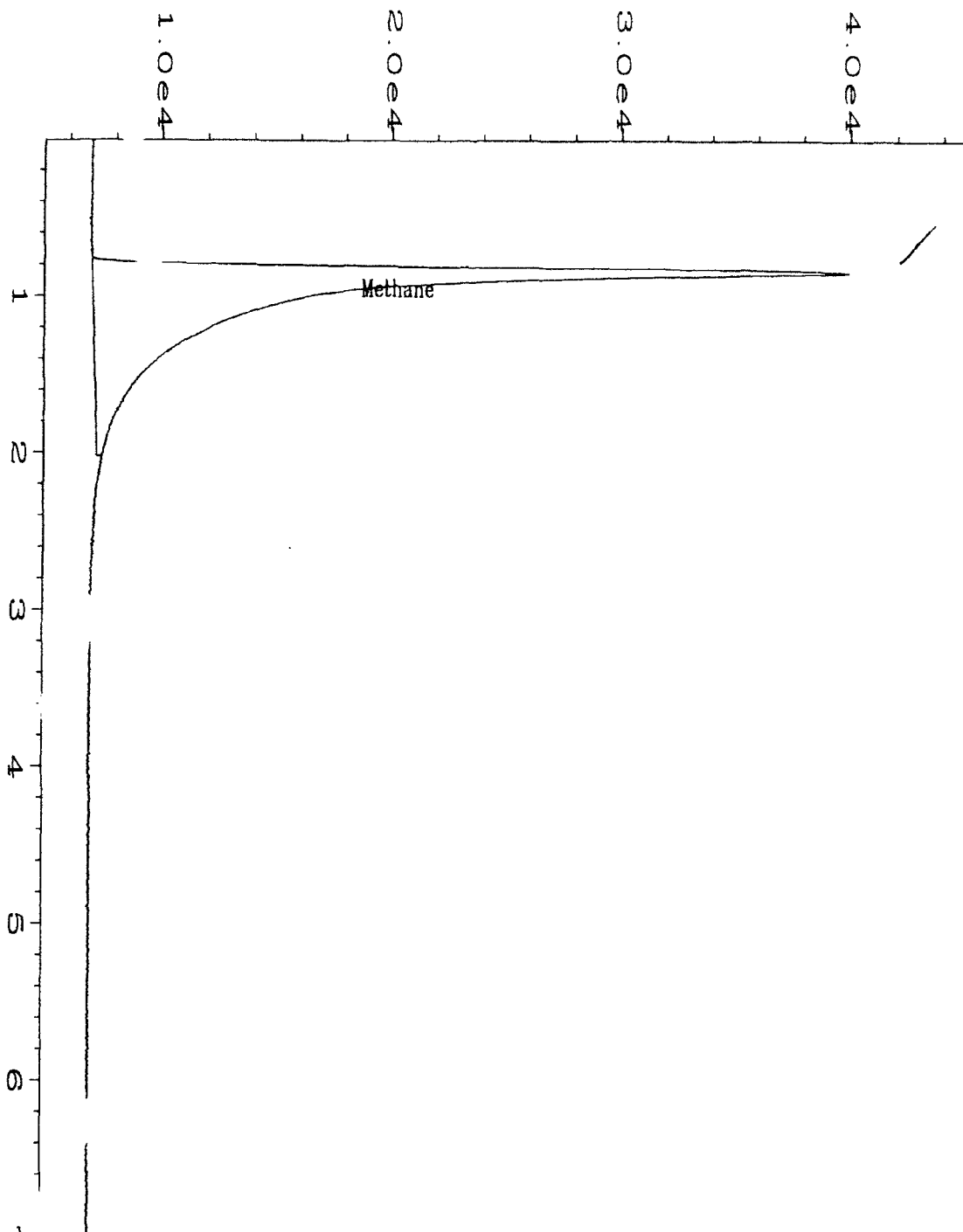
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\020R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 20
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09251;50	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES.. 1
Acquired on	: 28 Jul 95 01:29 PM	Analysis Method	: METH0728.M
Report Created on	: 01 Aug 95 11:54 AM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-1S;Water(inject 10 ul)		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

RSK-175 Gas Method
Methane Gas Matrix Spike / Matrix Spike Duplicate Report

Client Sample No.	: 24PZ-3S	Client Project No.	: MacDill/722450.21020
Lab Sample No.	: X09242	Lab Project No.	: 95-2330
Date Sampled	: 7/21/95	EPA Method No.	: RSKSOP-175
Date Received	: 7/22/95	Matrix	: Water
Date Prepared	: 7/28/95	Method Blank	: GB072895
Date Analyzed	: 7/28/95	Lab File No's.	: GAS0728012,013
E.A. MS/MSD Spike Source No.	: 1719		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Methane Gas	500	119	690	114	N/A

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Methane Gas	500	681	113	2.1	N/A	N/A

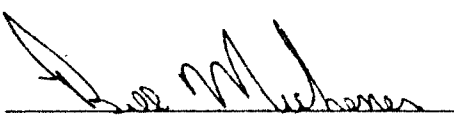
RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

NOTES:

* = Values outside of QC limits.

NA = Not analyzed/not available

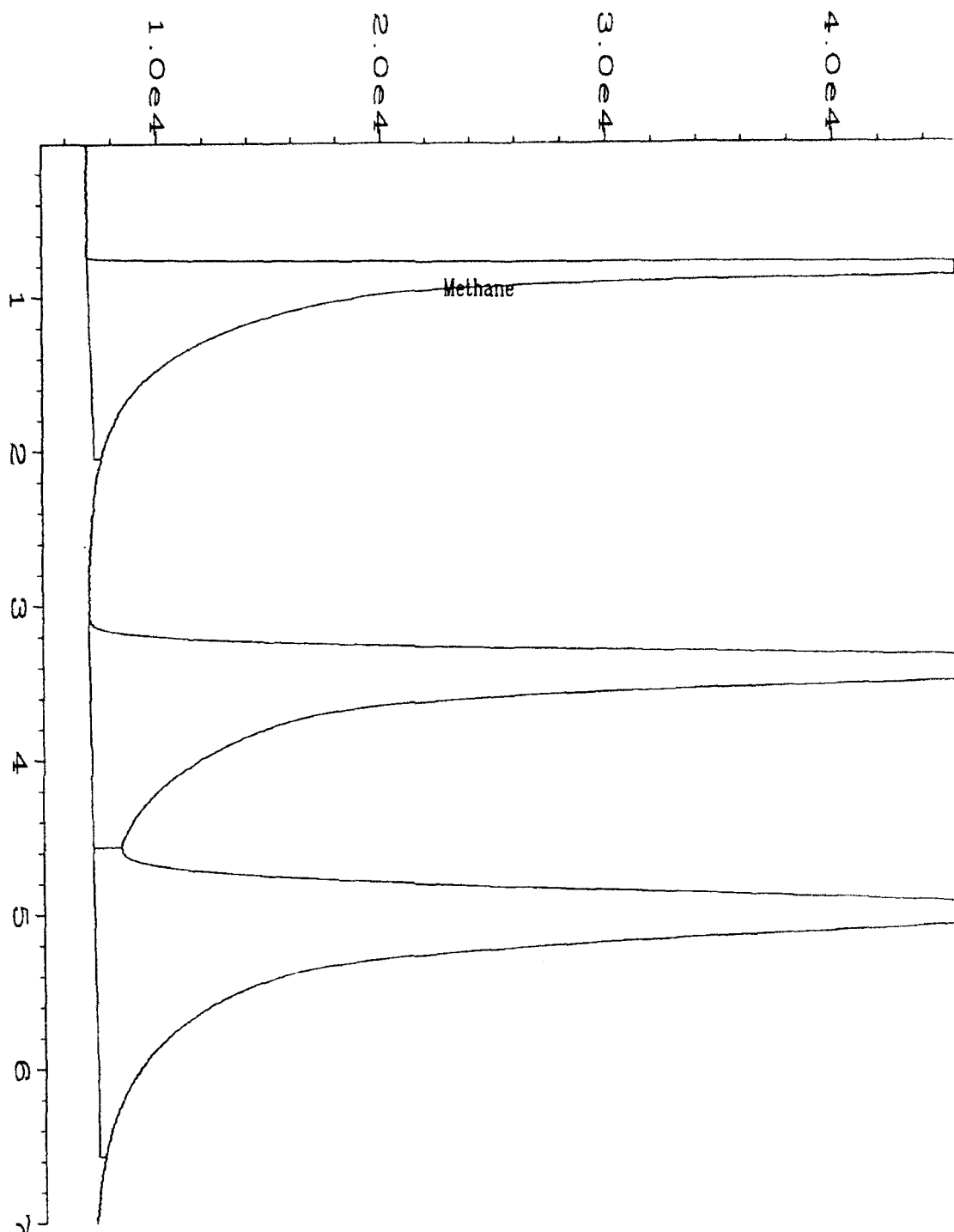
Note: The Spike was made by taking the sample and displacing 4ml of headspace with helium, Then with drawing 50ul of headspace + 50ul of a 1% methane,ethane,ethene mixture #1719 into a needle and injecting into the GC resulting in a theoretical spike concentration of 500 ppm.



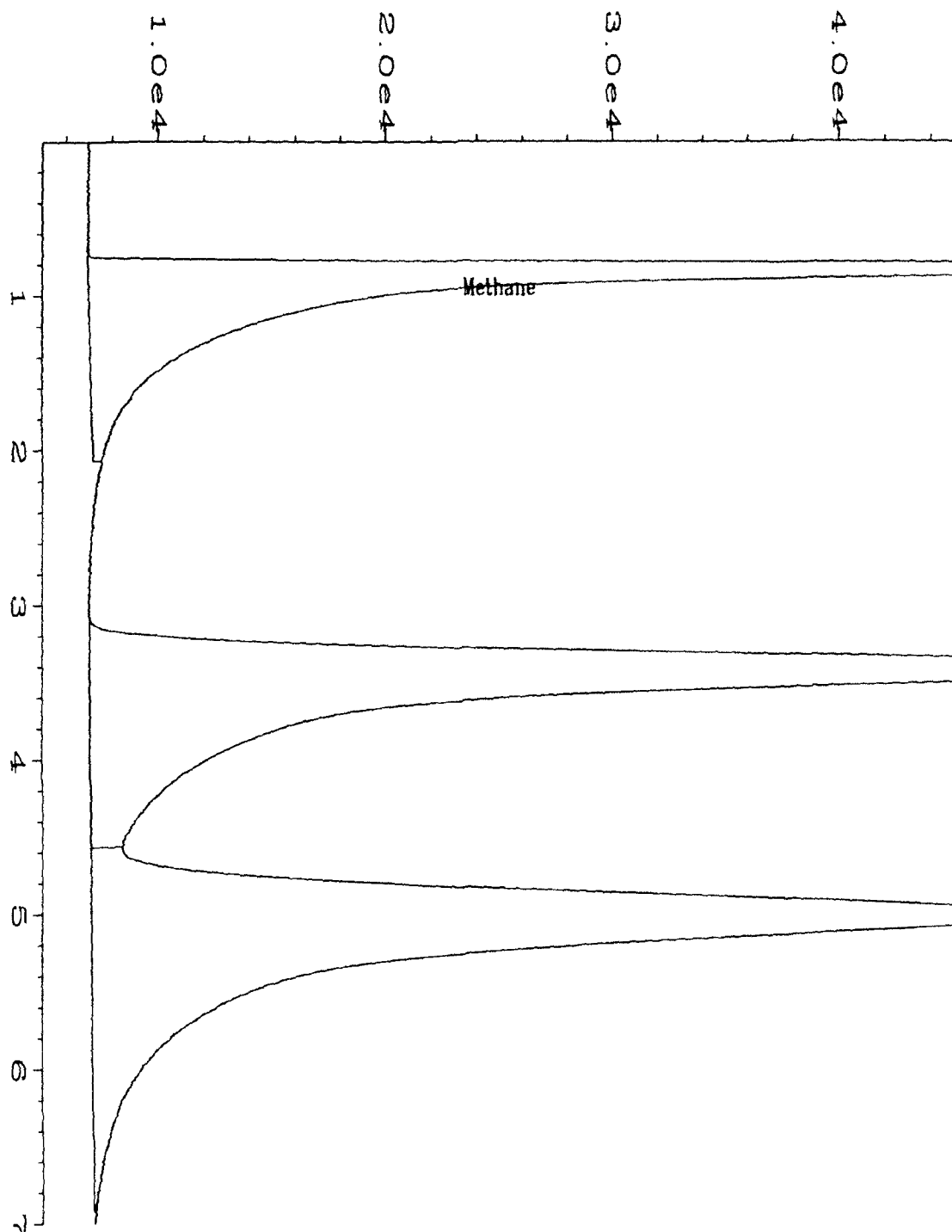
Analyst



Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\012R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 12
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09242MS;10	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASE. PH
Acquired on	: 28 Jul 95 11:17 AM	Analysis Method	: METH0728..
Report Created on:	01 Aug 95 11:54 AM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-3MS1;50 ul of sample + 50 ul of a 1% methane,ethane,ethene 500 ppm spike #1719		



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\013R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 13
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X09242MSDupl;10	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES.MTH
Acquired on	: 28 Jul 95 11:41 AM	Analysis Method	: METH0728.MTH
Report Created on:	: 01 Aug 95 11:54 AM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2330;24PZ-3MS2;50 ul of sample + 50 ul of a 1% methane,ethane,ethene 500 ppm spike #1719		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

RSK-175 Gas Method
Methane LCS Report Form

LCS No. : LCS072895 EPA Method No. : RSKSOP-175
Date Prepared : 7/28/95 Matrix : Water
Date Analyzed : 7/28/95 Method Blank : GB072895
E.A. LCS Source No. : 1719 Lab File No. : GAS0728010

Compound	Spike Added (mg/L)	Method Blank Concentration (mg/L)	LCS Concentration (mg/L)	LCS %REC	QC Limits %REC
Methane Gas	500	0	516	103	N/A

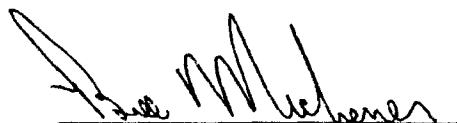
Spike Recovery: 0 out of (1) outside limits.


Note: The LCS was made by taking the sample and displacing 4ml of headspace with helium, Then with drawing 450ul of headspace + 50ul of a 1% methane,ethane,ethene mixture #1719 into a needle and injecting into the GC resulting in a theoretical concentration of 500 ppm.

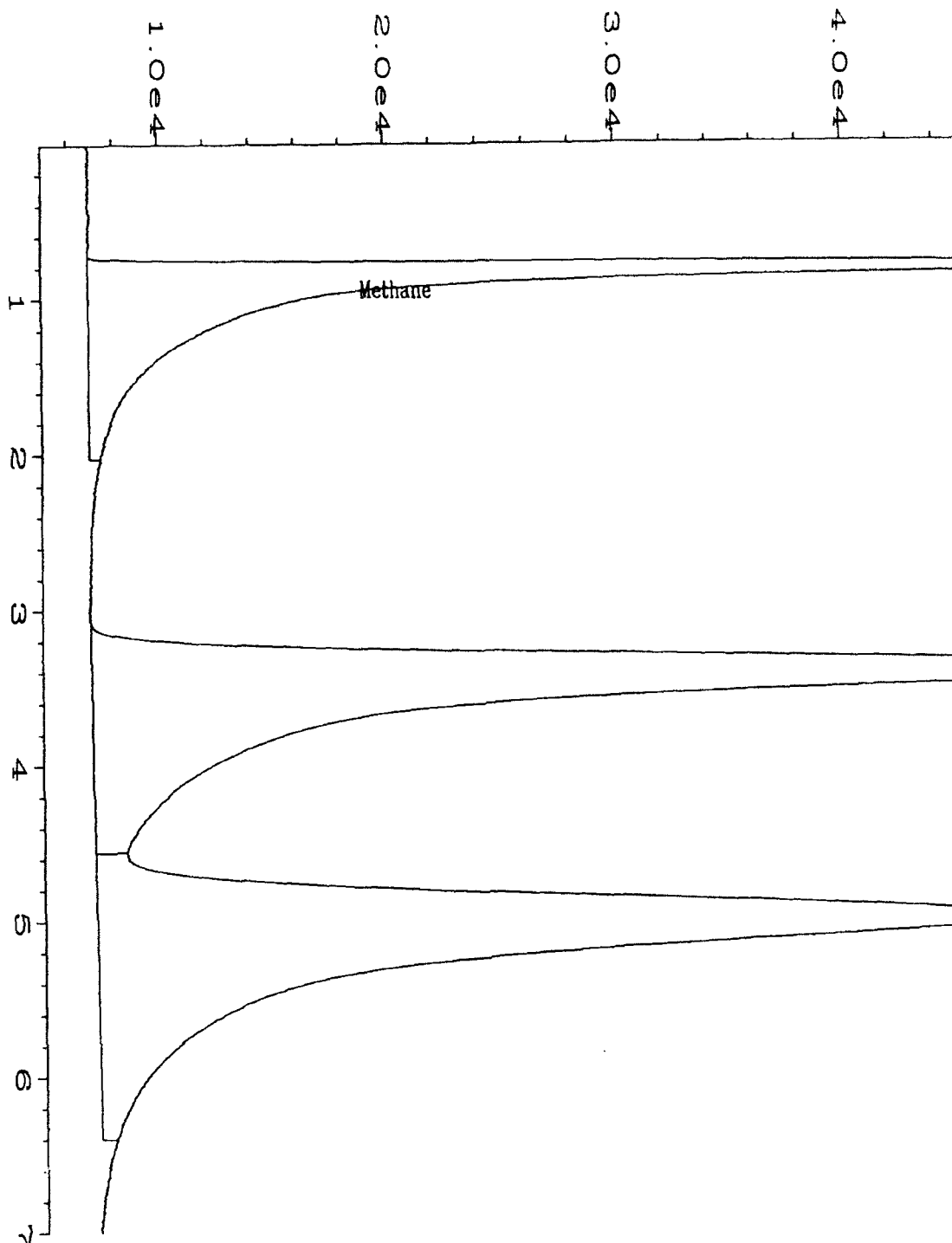
NOTES:

* = Values outside of QC limits.

NA = Not analyzed/not applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0728\010R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 10
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: LCS072895;Gas	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES.MTH
Entered on	: 28 Jul 95 10:06 AM	Analysis Method	: METH0728.MTH
Report Created on:	: 01 Aug 95 11:54 AM	Sample Amount	: 0
Last Recalib on	: 28 JUL 95 09:46 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Laboratory Control Sample		
	: Displaced 4 ml of Water from Water filled VOA with Helium,		
	: withdrew 450ul + 50 ul of a 1% methane ethane ethene		

EVERGREEN ANALYTICAL, INC.
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(303)425-6021

Anions

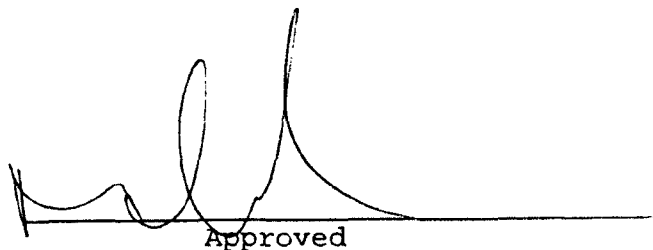
Date Sampled : 7/21/95	Client Project ID. : 722450.21020	MacDill/
Date Received : 7/22/95	Lab Project No. : 95-2330	
Date Prepared : 7/22/95	Method : EPA 300.0	
Date Analyzed : 7/23/95	Matrix : Water	
	Detection Limit : 0.25 mg/L	

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Sulfate (mg/L)</u>	<u>Dilution Factor</u>
X09242	24PZ-3S	5.2	1X
X09243	24PZ-3MS1	5.5	1X
X09244	24PZ-3MS2	5.3	1X
X09245	24PZ-3D	164	10X
X09246	24PZ-5S	5.0	1X
X09247	24PZ-4S	18.4	1X
X09248	24PZ-2S	34.9	1X
X09249	24PZ-2R	36.8	1X
X09251	24PZ-1S	0.86	1X
Method Blank (7/23/95)		<0.25	

Quality Assurance

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X09248	24PZ-2S Matrix Spike	10.0	34.9	46.5	116
X09248	24PZ-2S Matrix Spike Dup	10.0	34.9	45.9	109
MS/MSD RPD					5.7

Dale J. Byrum
Analyst


Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

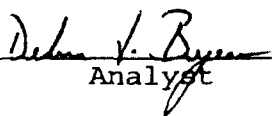
Anions


Date Sampled : 7/21/95 Client Project ID. : MacDill/
Date Received : 7/22/95 Lab Project No. : 722450.21020
Date Prepared : 7/22/95 Method : 95-2330
Date Analyzed : 7/23/95 Matrix : EPA 300.0
Detection Limit : Water
: 0.25 mg/L

Evergreen Sample #	Client Sample ID	Chloride (mg/L)	Dilution Factor
X09242	24PZ-3S	6.5	1X
X09243	24PZ-3MS1	7.4	1X
X09244	24PZ-3MS2	6.5	1X
X09245	24PZ-3D	1490	100X
X09246	24PZ-5S	8.1	1X
X09247	24PZ-4S	6.9	1X
X09248	24PZ-2S	9.5	1X
X09249	24PZ-2R	12.1	1X
X09251	24PZ-1S	27.2	1X
Method Blank (7/23/95)		<0.25	

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X09248	24PZ-2S Matrix Spike	10.0	9.5	20.8	112
X09248	24PZ-2S Matrix Spike Dup	10.0	9.5	20.8	112
MS/MSD RPD					0.080


Analyst


Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/21/95 Client Project ID. : MacDill/
Date Received : 7/22/95 Lab Project No. : 722450.21020
Date Prepared : 7/22/95 Method : 95-2330
Date Analyzed : 7/23/95 Matrix : EPA 300.0
Detection Limit : Water
: 0.076 mg/L

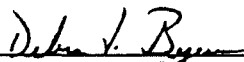
Evergreen Sample #	Client Sample ID	Nitrite-N(mg/L)	Dilution Factor
X09242	24PZ-3S	<0.076	1X
X09243	24PZ-3MS1	<0.076	1X
X09244	24PZ-3MS2	<0.076	1X
X09245	24PZ-3D	<0.76*	10X
X09246	24PZ-5S	<0.076	1X
X09247	24PZ-4S	<0.076	1X
X09248	24PZ-2S	0.084	1X
X09249	24PZ-2R	0.089	1X
X09251	24PZ-1S	<0.076	1X
Method Blank (7/23/95)		<0.076	

Quality Assurance**

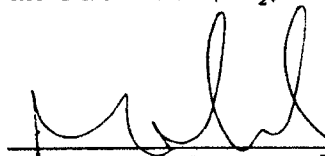
		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X09248	24PZ-2S Matrix Spike	10.0	0.28	10.2	100
X09248	24PZ-2S Matrix Spike Dup	10.0	0.28	9.8	95
MS/MSD RPD					4.5

* Increased detection limit due to matrix interference.

** Quality assurance results reported an Nitrite (NO₂).



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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Anions

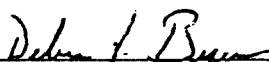
Date Sampled : 7/21/95	Client Project ID. : 722450.21020
Date Received : 7/22/95	Lab Project No. : 95-2330
Date Prepared : 7/22/95	Method : EPA 300.0
Date Analyzed : 7/23/95	Matrix : Water
	Detection Limit : 0.056 mg/L

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Nitrate-N(mg/L)</u>	<u>Dilution Factor</u>
X09242	24PZ-3S	<0.056	1X
X09243	24PZ-3MS1	0.068	1X
X09244	24PZ-3MS2	<0.056	1X
X09245	24PZ-3D	<0.056	1X
X09246	24PZ-5S	<0.056	1X
X09247	24PZ-4S	1.3	1X
X09248	24PZ-2S	8.2	1X
X09249	24PZ-2R	8.9	1X
X09251	24PZ-1S	<0.056	1X
Method Blank (7/23/95)		<0.056	

Quality Assurance**

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X09248	24PZ-2S	10.0	36.5	47.8	113
	Matrix Spike				
X09248	24PZ-2S	10.0	36.5	46.8	103
	Matrix Spike Dup				
	MS/MSD RPD				9.0

** Quality assurance results reported an Nitrate (NO₃).



Analyst



Approved

APPENDIX D

MODEL INPUT PARAMETERS AND RELATED CALCULATIONS

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Client AFCEE/MACOILL AFB

Job No. 722450, 21050

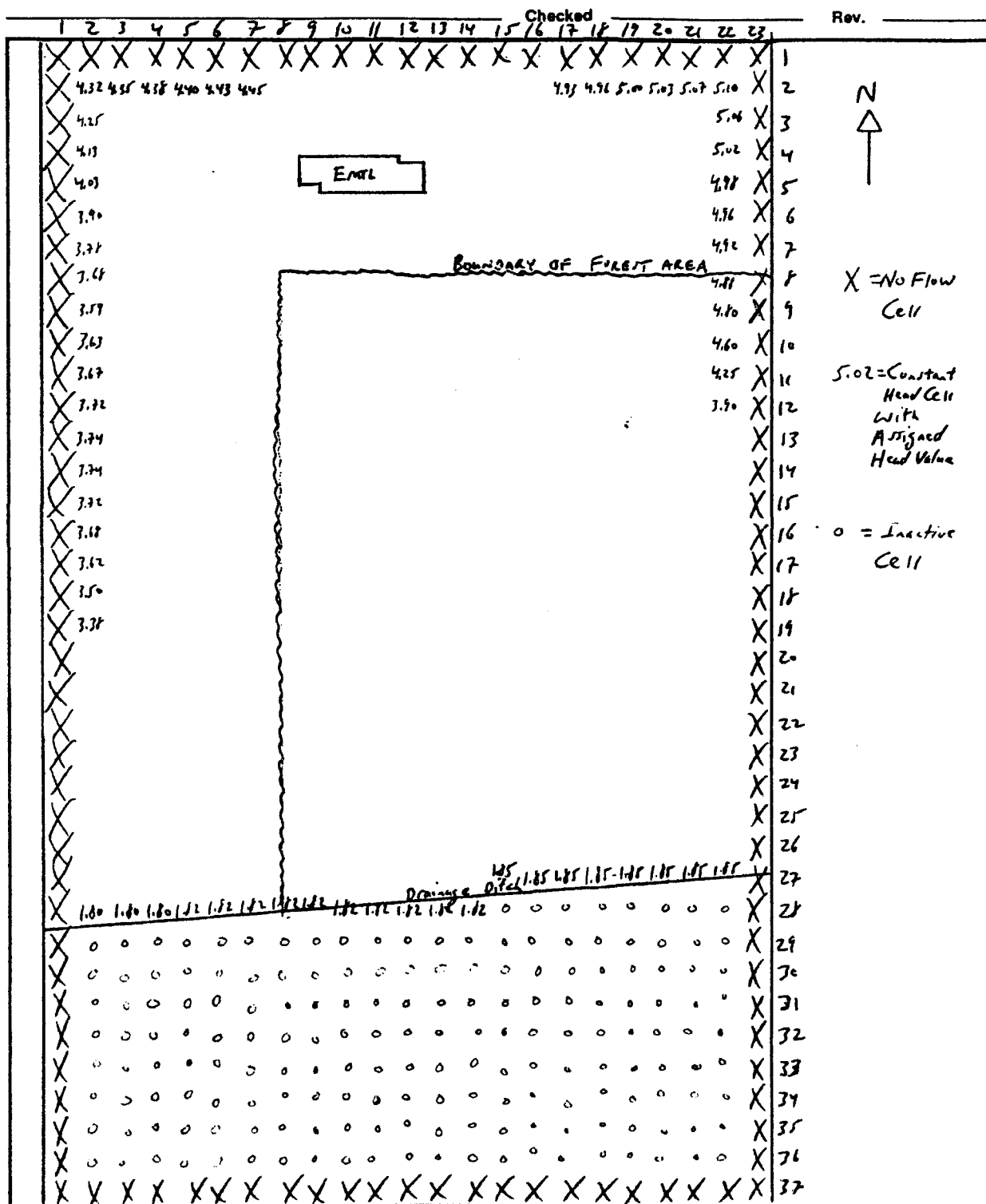
Sheet 1 of 1

Subject Model Grid with Boundary Conditions

By JKH

Date 1/7/96

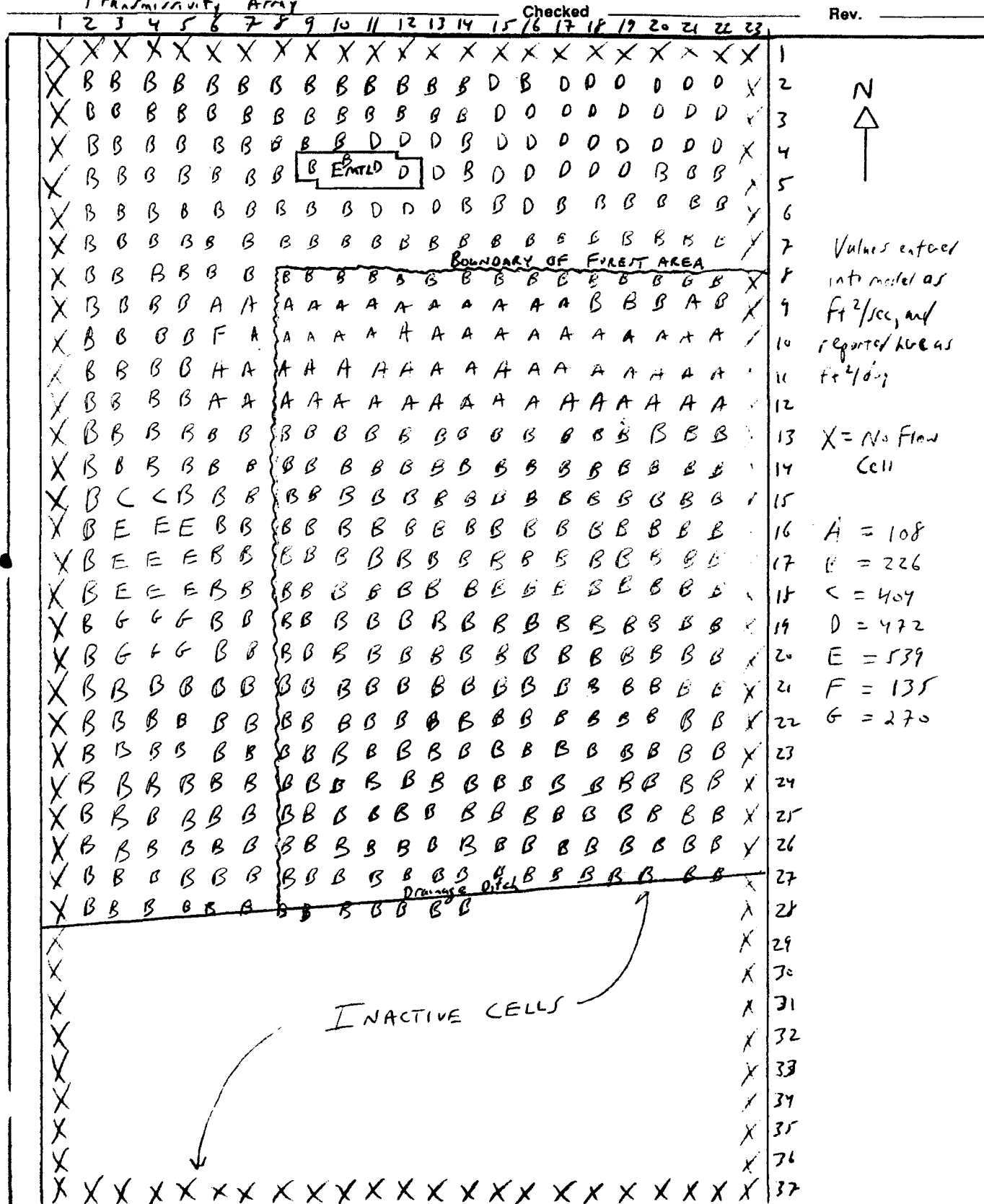
Rev. _____



Client AFCCE/MACOLL AFB
 Subject Model Grid with Calibrated
Transmissivity Array

Job No. 722450-21050
 By JRH

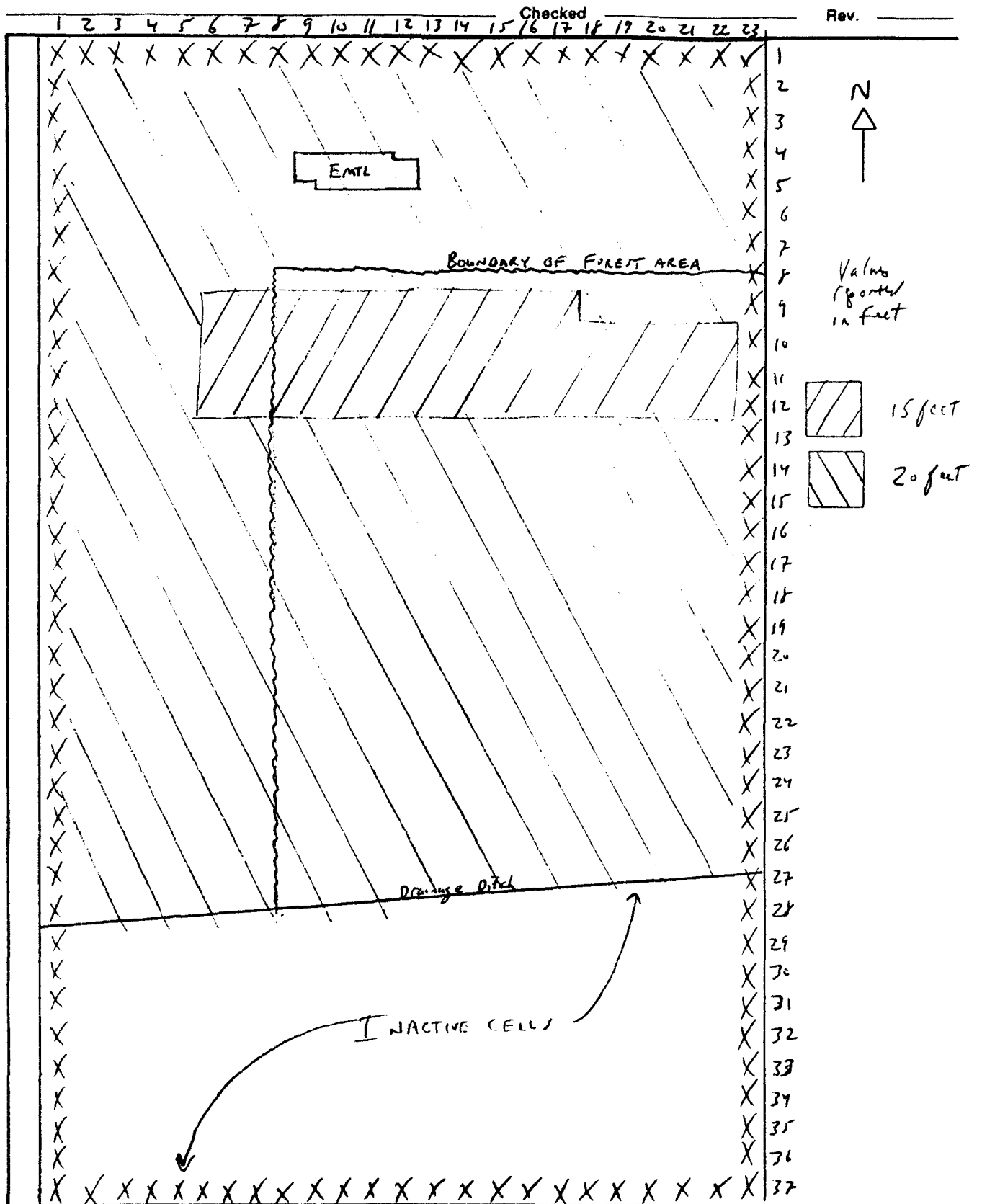
Sheet 1 of 1
 Date 1/4/96
 Rev. _____



Client AFCCE/MACDILL AFB
 Subject Model Grid with Aquifer Thickness

Job No. 722450-21050
 By JRH

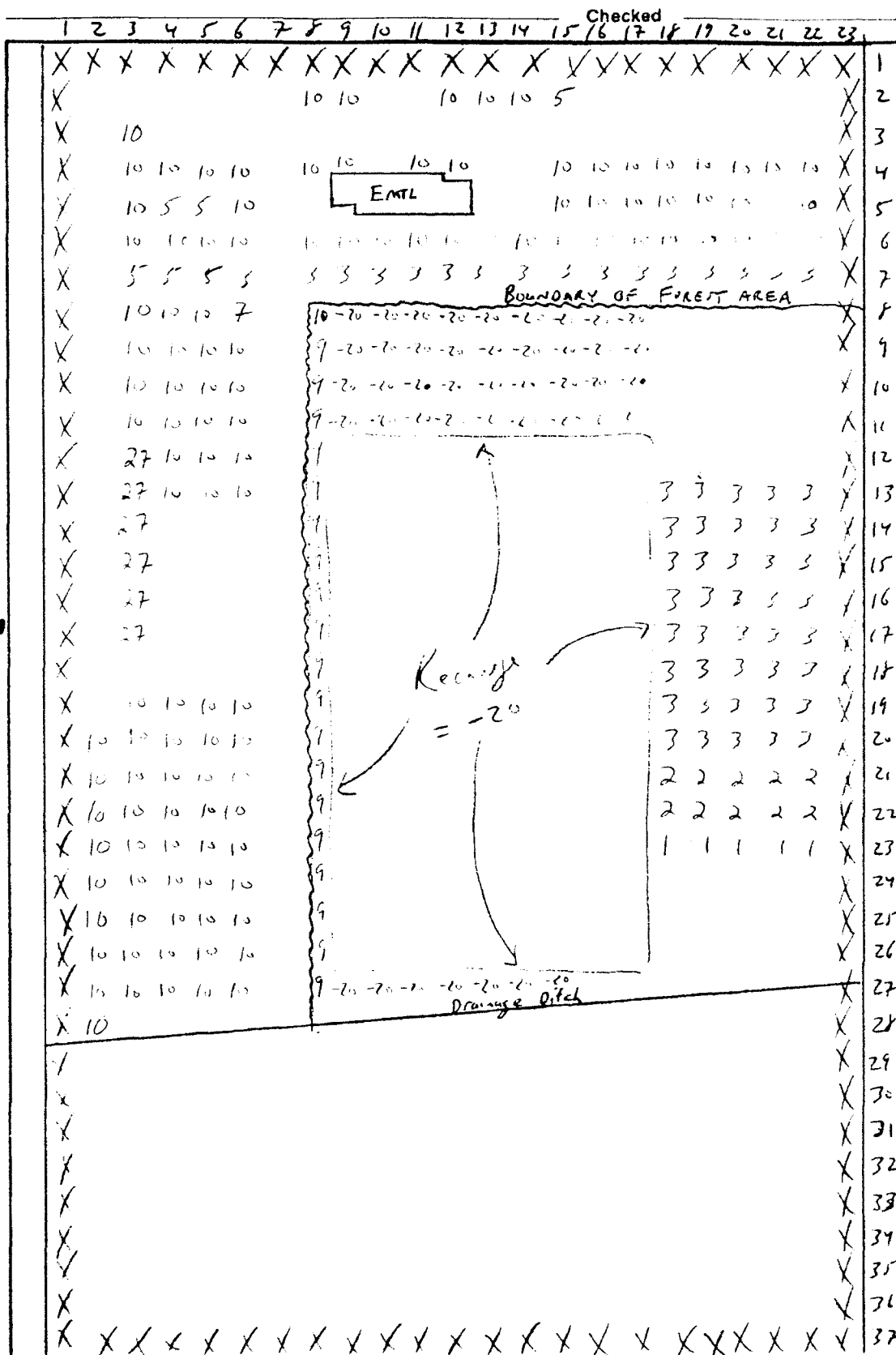
Sheet 1 of 1
 Date 1/4/85
 Rev. _____



Client AFCEE/MACILL AFO
 Subject Model Grid with Recharge Rates

Job No. 722450-21050
 By JRH

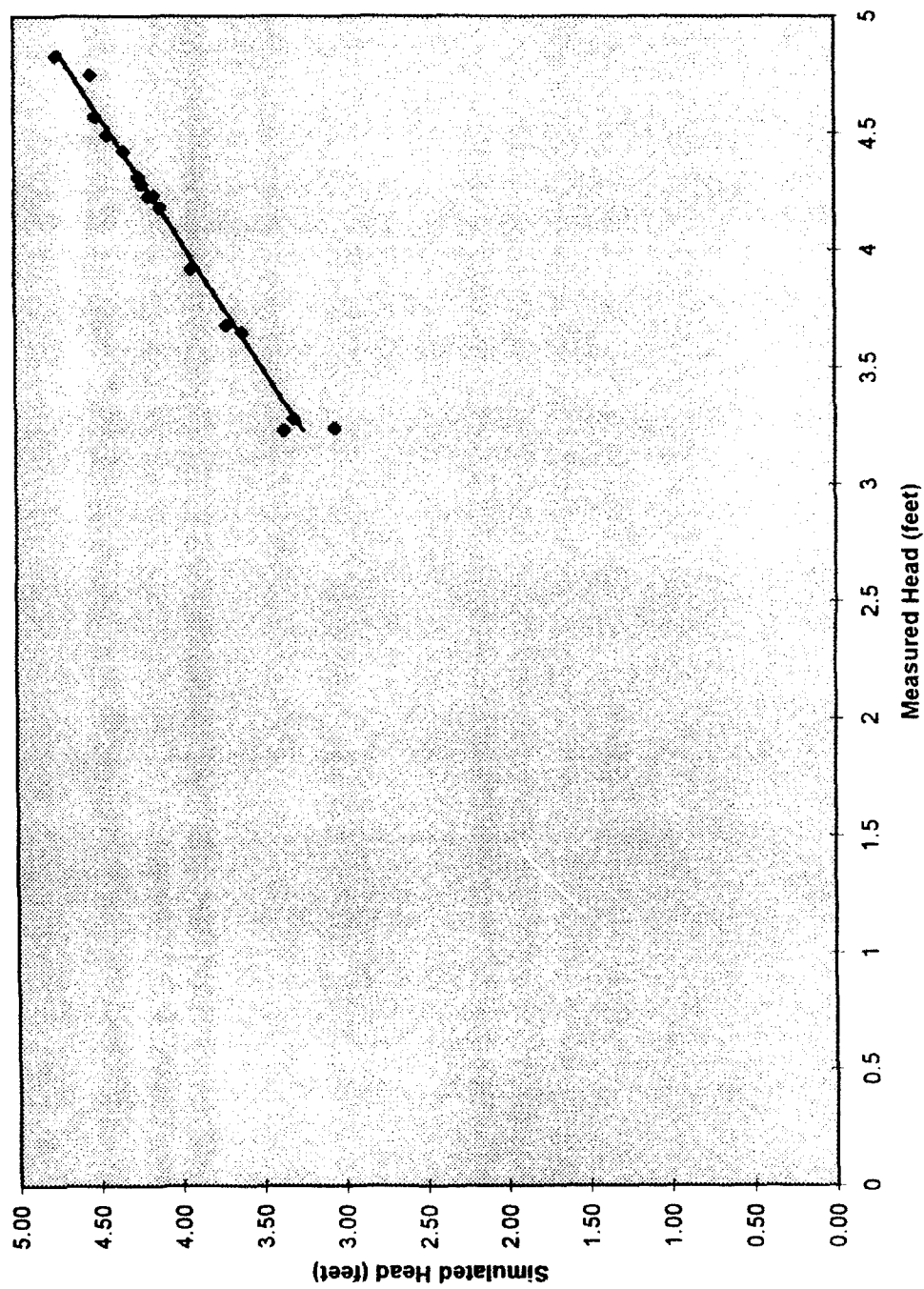
Sheet 1 of 1
 Date 1/4/96
 Rev. _____



1

Chart1

Simulated Vs. Measured Head, Calibrated Flow Model, Site OT 24, MacDill AFB

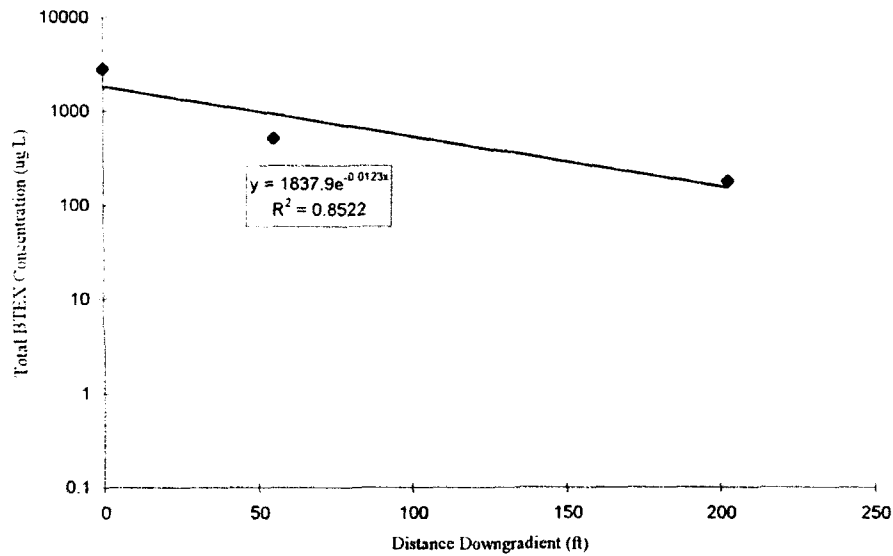


**FIRST-ORDER RATE CONSTANT CALCULATION
USING THE METHOD OF BUSCHECK AND ALCANTAR (1995)**

**SITE OT 24
INTRINSIC REMEDIATION TS
MACDILL AFB, FLORIDA**

Point	Distance	B, T, E, & X (µg/L)
	Downgradient	Mar-95
24MP-1S	0	2840
MD24-6	55.2	514
241PZ-1S	202.9	180

**PLOT OF TOTAL T, E, & X CONCENTRATION
VERSUS DISTANCE**



$$\lambda = v_c/4\alpha_x([1+2\alpha_x(k/v_c)]^2-1)$$

where $v_c = 0.022$

$\alpha_x = 30$

$k/v = 0.0123$

therefore $\lambda = 3.70E-04$

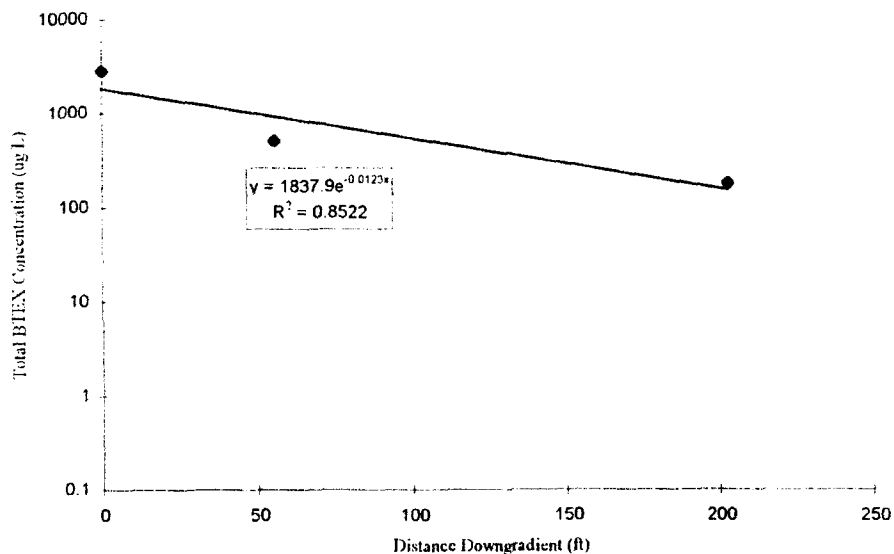
**FIRST-ORDER RATE CONSTANT CALCULATION
USING THE METHOD OF BUSCHECK AND ALCANTAR (1995)**

SITE OT 24

**INTRINSIC REMEDIATION TS
MACDILL AFB, FLORIDA**

Point	Distance Downgradient	B, T, E, & X (µg/l.) Mar-95
24MP-1S	0	2840
MD24-6	55.2	514
24PZ-1S	202.9	180

**PLOT OF TOTAL T, E, & X CONCENTRATION
VERSUS DISTANCE**



$$\lambda = v_c/4\alpha_x([1+2\alpha_x(k/v_x)]^2-1)$$

where $v_c = 0.057$

$\alpha_x = 30$

$k/v = 0.0123$

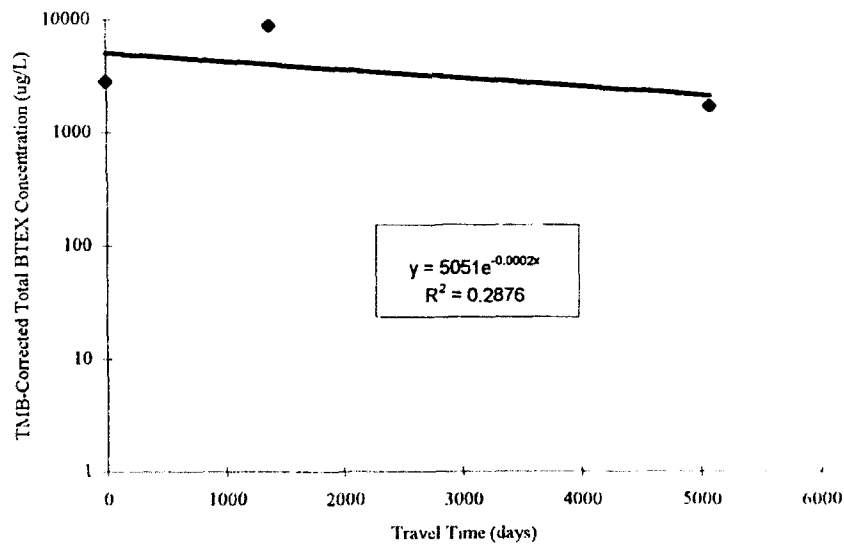
therefore $\lambda = 9.60E-04$

**FIRST-ORDER RATE CONSTANT CALCULATION
USING TMB AS A CONSERVATIVE TRACER
SITE OT 24
INTRINSIC REMEDIATION TS
MACDILL AFB, FLORIDA**

Point	Distance Downgradient (ft)	Travel Time Between Upgradient and Downgradient Point (days)	Measured Total BTEX Concentration ($\mu\text{g/L}$)	Total Trimethylbenzene Concentration ($\mu\text{g/L}$)	Trimethylbenzene- Corrected Total BTEX Concentration ($\mu\text{g/L}$)
24MP-1S	0	0	2840	65	2840
MD24-6	55	1375	514	3.8	8792
24PZ-1S	203	5075	180	0.4	1710

$v_c = 0.04 \text{ ft/day}$

**PLOT OF TMB-CORRECTED TOTAL BTEX CONCENTRATION
VERSUS TIME**



BTEX Partitioning Calculations

	K _{ow}	C _f JP-4 (mg/L)	C _w JP-4 (mg/L)	C _f OT 24 (mg/L)	C _w OT 24 (mg/L)
Benzene	382	3750	9.817	5	0.013
Toluene	1175	9975	8.489	1	0.001
Ethylbenzene	4142	2775	0.670	2.5	0.001
o-Xylene		7575		4.7	
m-Xylene		7200		7.3	
p-Xylene		2625		6.1	
Total Xylenes	4793	17400	3.630	18.1	0.004
Total			22.606		0.018

What is the BTEX concentration of LNAPL that could cause a dissolved BTEX concentration of 2,840 ug/L?

	K(fw)	C(w)	C(f)
benzene	382	0.22	84
toluene	1175	1.8	2115
ethylbenzene	4142	0.13	538
xylenes	4793	0.69	3307
total BTEX		2.84	6045

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Knowns:

- a) Linear GW velocity = $\sim 0.15 \text{ ft/day} = 0.046 \text{ m/day}$
b) porosity = ~ 0.30
c) Soil Bulk density = $\sim 1.6 \text{ g/cm}^3$
d) Distribution coefficients (K_d) (for BTEX)

B	0.221
T	0.532
E	1.310
X	1.105 (average of M, O, & P Xylene)

- e) Starting Concentration (C_{ow}) are as follows:
(for groundwater)

B	220 $\mu\text{g/L}$
T	1800 $\mu\text{g/L}$
E	130 $\mu\text{g/L}$
X	690 $\mu\text{g/L}$

Assumptions:

- a) 10% of equilibrium will be reached with each flush. A value of 100% was not selected because of limited contact time and because some contaminant mass will be in contact with flowing pure water with each flush. Choosing a value less than 100% is also more conservative.

- b.) Simulated Volume = 1 m^3

$$\text{mass of soil} = (1.6 \text{ g/cm}^3) \left(\frac{10^6 \text{ cm}^3}{\text{m}^3} \right) \left(\frac{1 \text{ kg}}{1000 \text{ g}} \right) = 1600 \text{ kg/m}^3$$

$$\text{mass of water} = (1 \text{ g/cm}^3) \left(\frac{0.3 \text{ cm}^3 \text{ H}_2\text{O}}{\text{cm}^3 \text{ soil}} \right) = \frac{0.3 \text{ g}}{\text{cm}^3} = 300 \text{ kg/m}^3$$

- c.) New Volume of H_2O will pass through soil mass approximately 17 times per year

$$\frac{1}{V} = \frac{1}{0.046 \text{ day}} = 21.7 \text{ day} = 0.06 \text{ yr}$$

Compute Pore Volumes exchanged per day using larger
aquifer volume (This should be more accurate than using
a $1m^3$ volume)

Assumes pumping of only 1 well

Assume average GW pumping rate of 2.5 gpm (from CH2M Hill, 1991b)
(CH2M Hill assumed 2 wells pumping total of 5 gpm)
The area of contaminated soil can be approximated by a
circle with a diameter of 60 feet. Therefore, the volume
of aquifer that we want to flush with fresh water
is a cylinder with a diameter of 60' & a height of 20'.

The Volume of water in this cylinder = $V = \pi r^2 h \times \text{porosity}$

$$\begin{aligned} &= \pi (30ft)^2 (20ft) (0.30) \\ &= 16,961 ft^3 \\ &= 1 \text{ pore volume} \end{aligned}$$

Pore Volumes exchanged per day at the perimeter of this
cylinder:

$$\begin{aligned} \frac{2.5 \frac{gal}{min} \times \frac{1ft^3}{7.48gal} \times 1440 \frac{min}{day}}{16,961 ft^3 / \text{pore volume}} &= 0.028 \text{ pore vol/day} \\ &= 10.2 \text{ pore vol/year} \end{aligned}$$

This is conservative, because the number of pore volume
exchanges per year will increase as the groundwater moves
closer to the extraction well. For example, at a radial distance
of 15 feet from the extraction well:

$$\begin{aligned} V &= \pi (15ft)^2 (20) (0.30) \\ &= 4,240 ft^3 \end{aligned}$$

And the number of pore volumes per year increases to 41

The remediation time decreases as you approach the extraction well.

Select an average rate of 25 pore volumes per year = 0.07/day
(= 1 pore volume every 14 days)

Equations:

$$a) \quad k_d = \frac{\mu\text{g/kg}}{\mu\text{g/L}} = \frac{\text{mass adsorbed to soil}}{\text{mass dissolved in GW}}$$

$$\therefore \mu\text{g/L} = \mu\text{g/kg} \times 0.10 / k_d \quad (\text{w/ efficiency factor})$$

$$b) \quad m_{s, \text{new}} = \text{mass of contaminant in } 1\text{m}^3 \text{ of aquifer}$$

$$m_{s, \text{old}} = \text{ " " " " " soil}$$

$$m_w = \text{ " " " " " water}$$

$$m_{s, \text{new}} = m_{s, \text{old}} - m_w$$

$$\mu\text{g/kg} = (\mu\text{g/kg} - \mu\text{g/L}) \rightarrow \text{need to correct for density}$$

$$\text{remember: } \frac{350 \text{ g/m}^3}{1700 \text{ kg/m}^3} = 0.18 \text{ g/kg}$$

$$\therefore \mu\text{g/kg (remaining)} = \mu\text{g/kg initial} - [(\mu\text{g/L reached}) (0.18 \text{ g/kg})]$$

The following spreadsheet shows these calculations for BTEX. Note that leaching efficiency was defined to get from C_{0s} to C_{0w} .

Satch Flusk Model
PUMP-AND-TREAT CONTAMINANT REMOVAL EFFICIENCIES
 SITE OT 24
 INTRINSIC REMEDIATION TS
 MACDILL AIR FORCE BASE, FLORIDA

Days	1m ³ Pore Volume	Benzene Soil Concn.	Water Concn.	Toluene Soil Concn.	Water Concn.	Ethylbenzene Soil Concn.	Water Concn.	Total Xylenes Soil Concn.	Water Concn.
0	0	486.2	220.0	9576.0	1800.0	1703.0	130.0	7624.5	699.0
14	1	446.6	202.1	9252.0	1739.1	1679.6	128.2	7500.3	678.8
28	2	410.2	185.6	8939.0	1680.3	1656.5	126.5	7378.1	667.7
42	3	376.8	170.5	8636.5	1623.4	1633.8	124.7	7257.9	656.3
56	4	346.1	156.6	8344.3	1568.5	1611.3	123.0	7139.7	646.1
70	5	317.9	143.9	8062.0	1515.4	1589.2	121.3	7023.4	635.6
84	6	292.0	132.1	7789.2	1464.1	1567.3	119.6	6909.0	625.2
98	7	268.3	121.4	7525.7	1414.6	1545.8	118.0	6796.5	615.1
112	8	246.4	111.5	7271.0	1366.7	1524.6	116.4	6685.7	605.0
126	9	226.3	102.4	7025.0	1320.5	1503.6	114.8	6576.8	595.2
140	10	207.9	94.1	6787.3	1275.8	1483.0	113.2	6469.7	585.5
448	32	32.1	14.5	3183.0	598.3	1093.8	83.5	4507.8	407.9
462	33	29.5	13.3	3075.3	578.1	1078.8	82.3	4434.4	401.3
476	34	27.1	12.2	2971.2	558.5	1063.9	81.2	4362.1	394.8
490	35	24.9	11.2	2870.7	539.6	1049.3	80.1	4291.1	388.3
504	36	22.8	10.3	2773.6	521.3	1034.9	79.0	4221.2	382.0
518	37	21.0	9.5	2679.7	503.7	1020.7	77.9	4152.4	375.8
532	38	19.3	8.7	2589.1	486.7	1006.7	76.8	4084.8	369.7
546	39	17.7	8.0	2501.5	470.2	992.8	75.8	4018.2	363.6
560	40	16.3	7.4	2416.8	454.3	979.2	74.7	3952.8	357.7
2492	178	0.0	0.0	20.9	3.9	145.1	11.1	409.8	37.1
2506	179	0.0	0.0	20.2	3.8	143.1	10.9	403.1	36.5
2520	180	0.0	0.0	19.5	3.7	141.1	10.8	396.6	35.9
2534	181	0.0	0.0	18.9	3.5	139.2	10.6	390.1	35.3
2548	182	0.0	0.0	18.2	3.4	137.3	10.5	383.8	34.7
2562	183	0.0	0.0	17.6	3.3	135.4	10.3	377.5	34.2

Shaded boxes show when total BTEX is less than 1,000 and 50 micrograms per liter.

APPENDIX E
MODEL INPUT AND OUTPUT FILES

APPENDIX F
REMEDIAL ALTERNATIVE COST CALCULATIONS

MacDill AFB Calculations--Site OT 24									
Alternative 1: Long-term Monitoring									
Cost calculations									
Misc calculations		Description		Unit	Qty	Unit Price	Subtotal	Total	Source (If applicable)
(new LTM/POC wells outside of forest)		Well Installation		ea	2	\$ 1,000	\$ 2,000	\$ 4,850	
Number of shallow LTM/POC wells:		Mobilization		ea	2	\$ 1,000	\$ 2,000		
Number of wells: 3		Well Installation		In ft	39	\$ 50	\$ 1,950		
Depth each: 13 ft		Soil Disposal		drum	3	\$ 100	\$ 300		
		Soil Samples		ea	3	\$ 200	\$ 600		
Note: Soil samples analyzed for BTEX, TPH, reactivity, and corrosivity for disposal purposes.									
Costs for Manually-Driven Wellpoints (in forest)									
Number of shallow wellpoints:		Wellpoint Installation		ea	7	\$ 250	\$ 1,750		
Number of wellpoints: 7		Well Materials		ea	7	\$ 250			
Depth each: 8 ft									

Alternative 1: Long-Term Monitoring and Institutional Controls

Standard Rate Schedule

Billing Category Cost Code/(Billing Category)	Billing Rate	Task 1 (hrs)	Install New LTM/POC Wells (\$)	Task 2 (hrs)	Sampling (\$)	Task 3 (hrs)	Reporting & PM (\$)
Word Processor 88/(15)	\$30	0	\$0	0	\$0	20	\$600
CADD Operator 58/(25)	\$47	0	\$0	0	\$0	20	\$940
Technician 42/(50)	\$40	50	\$2,000	30	\$1,200	30	\$1,200
Staff Level 16/(65)	\$57	50	\$2,850	30	\$1,710	60	\$3,420
Project Level 12/(70)	\$65	8	\$520	5	\$325	40	\$2,600
Senior Level 10/(80)	\$85	2	\$170	1	\$85	5	\$425
Principal 02/(85)	\$97	0	\$0	0	\$0	0	\$0
Total Labor (hrs) (\$)		110	\$5,540	66	\$3,320	175	\$9,185
ODCs							
Phone			\$20		\$10		\$40
Photocopy			\$10		\$5		\$100
Mail			\$100		\$200		\$50
Computer			\$100		\$0		\$400
CAD			\$0		\$0		\$200
WP			\$0		\$0		\$200
Travel			\$200		\$200		\$0
Per Diem			\$100		\$200		\$0
Eqpt. & Supplies			\$700		\$1,000		\$0
Total ODCs			\$1,230		\$1,615		\$990
Outside Services							
LTM/POC Well Installation Costs			\$6,600		\$0		\$0
Laboratory Fees		6 wells	\$1,600	8 wells	\$3,300		\$0
Other: Maintain Institutional Controls			\$0		\$0		\$5,000
Total Outside Services			\$8,200		\$3,300		\$5,000

Proposal Estimate	Task 1	Task 2	Task 3
Labor	\$5,540	\$3,320	\$9,185
ODC's	\$1,230	\$1,615	\$990
Outside Services	\$8,200	\$3,300	\$5,000
Total by Task	\$14,970	\$8,235	\$15,175
Total Labor	\$18,045		
Total ODCs	\$3,835		
Total Outside Services	\$16,500		
Total Project	\$38,380		

Task 1: Install New LTM/POC Wells

Task 2: Sampling per Event

Task 3: Reporting/PM per Event.

Notes for Alternative 1 Cost Spreadsheet, Continued.

See attached sheet for well installation details.

Lab fees for task 1 assume offsite analysis of 6 wells for aromatic/halogenated VOCs plus 2 QC samples.

Lab fees for task 2 assume offsite analysis of 8 wells for aromatic/halogenated VOCs and methane, plus 3 QC samples for VOCs.

OT 24, MacDill AFB, Alternative 1 Present Worth Costs			
Assume Annual Inflation Factor = 7%			
Present Worth Factor (PWF) 1yr = $[(1+0.07)^{-1}]/(0.07)(1+0.07) = 0.93$			
PWF (10 years) = $[(1+0.07)^{-10}]/(0.07)(1+0.07)^{10} = 7.02$			
PWF (26 years) = $[(1+0.07)^{-26}]/(0.07)(1+0.07)^{26} = 11.83$			
PW Cost for 1st 10 years of annual sampling: $PW = (7.02)(8,235) = \$57,810$			
Biannual Groundwater Sampling Costs from year 11 to year 25 (assume 8 sampling events):			
Year	Cost	Cum. Sum	Cum. PW
10	4136	57,810	57,810
11	3846.48	61,656.48	
12	3577.2264	66,233.7064	61,387
13	3326.82055	69,560.527	
14	3093.94311	71,654.4701	64,481
15	2877.3671	74,531.8372	
16	2675.9514	77,207.7886	67,157
17	2488.6348	79,696.4234	
18	2314.43036	82,010.8537	69,472
19	2152.42024	84,163.274	
20	2001.75082	86,165.0248	71,473
21	1861.62826	88,026.6531	
22	1731.31429	89,757.9673	73,205
23	1610.12229	91,368.0896	
24	1497.41373	92,865.5034	74,702
25	1392.59477	94,258.0981	
26	1295.11313	95,553.2112	75,997
Maintain Institutional Controls: $PW = (11.83)(5,000) =$			\$59,150
Install New Wells: $PW = (0.93)(14,970) =$			\$13,922
Groundwater Sampling (see above) =			\$75,997

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[illegible]

Site OT 24, MacDill AFB					
Alternative 2 Costs					
Assumptions:					
20-ft long horizontal bioventing/biosparging well					
Power Available within 100 ft of well					
Well installed in 4-ft-deep trench					
4 vapor monitoring points installed					
Base provides daily 10-min. check during system operation					
Capital Costs:					
Design, Remedial Action Plan, Regulatory Approval					\$15,000
Trench Construction (20 feet x \$100/ft) + (100 feet x \$70/ft)					\$9,000
Well Installation					\$1,000
Blower, Blower House, manifold, piping, gauges					\$2,500
Monitoring Points					\$1,000
System Installation Oversight					
Labor (1 person x 150 hr x \$60/hr)					\$9,000
ODCs					\$2,000
System Testing/Optimization					\$5,000
Subcontracting					\$2,000
Total					\$46,500
Annual Costs		\$15,435	for annual testing/reporting (see attached spreadsheet)		
		\$6,000	for semiannual testing/reporting		
I:\45021\tables\ot24\alt2cost.xls					

Alternative 2

Option One
Extended Testing of Existing Bioventing Systems, Cost Per Site
Title I A Services (For Work Completed in 1994 - 1997)

20-Jul-94
c:\biovent\option1.wk4

Task Description	Labor Hours				Total Hours	Total Cost
Task 1: Administration	6	6	6	8	32	\$824.34
Task 2: Extended Testing	2	8	20	15	105	\$2,339.66
Task 3: Letter Report Preparation	4	12	8	10	42	\$1,033.00
Total Labor Hours	12	26	34	33	179	
Labor Hourly Rates (CY 1996)	\$43.75	\$30.02	\$17.81	\$16.80		
Total Labor Costs	\$525.00	\$780.52	\$606.22	\$554.40		\$4,197.00

A. Direct Labor Cost	\$4,197.00
B. Home Office Overhead Including Fringe 139.61%	\$5,859.43
C. Total Labor Cost	\$10,056.43
D. Other Direct Costs	\$3,726.00
E. Total C and D	\$13,782.43
F. Profit on Item E at 11.99%	\$1,652.51
Total Cost (CONUS)	\$15,434.95
Total Cost (AK/IL/Johnston Atoll)	\$19,758.88

SITE OT 24, MacDill AFB
Alternative 2 Present Worth Costs

$$① \quad PW = \text{Capital Costs} + (\text{Annual Costs} \times \text{Present Worth Factor})$$

$$PWF(4 \text{ yrs}) = 3.39 \checkmark$$

$$PW(\text{biorent/biorepays}) = (\$46,550) + (3.39)(21,435) \\ = \boxed{\$119,165} \checkmark$$

$$② \quad \text{For LTM / Institutional Controls}$$

Assume 10 years annual sampling + 6 biannual events thereafter
= \$73,205 (from Alternative 1 spreadsheet)

Assume annual PM and reporting on same annual/biannual schedule as for sampling above:

$$PM = 22 \text{ yrs annually}$$

Reporting = Annually for 10 yrs, then biannually for 6 more sampling events

$$PWF(22 \text{ yrs}) = \frac{(1 + 0.07)^{22} - 1}{0.07 (1 + 0.07)^{22}} = 11.06$$

$$\text{Annual PM}(22 \text{ yrs}) = (\$3,000)(11.06) = \$33,180$$

$$\text{Reporting} = \$63,779 \checkmark (\text{from Alternative 1 spreadsheet})$$

$$\text{Institutional Controls} = (\$5,000)(11.06) = \$55,300$$

$$\text{Install new wells (from Alternative 1)} = \$13,922 (\text{Capital Cost})$$

$$\text{Total PW for LTM/Institutional Controls} = \$73,205 + \$13,922$$

$$+ \$33,180 + \$63,779 + \$55,300 = \boxed{\$239,386}$$

$$\text{Total PW} = \$119,165 + 239,386 = \boxed{\$358,551}$$

SITE OT 24, MacDill AFB
Alternative 3, Present With Guts

Capital Costs

Make current recovery + treatment
 system operational (e.g., replace
 pump + wiring, repack air stripper,
 etc.)

Assume \$20,000

Bioventing System Installation
 (from Alternative 2)

\$46,500 ✓

Install New LTM/PAC Wells
 (from Alternative 1)

\$13,922 ✓

Water Discharge Permitting

\$5,000

Air Emissions Permitting

\$5,000

Total \$90,422 ✓

Annual Costs

GW Extraction System O & M

- Labor (24 visits x 6 hr/visit x \$60/hr)

\$8,640

- ODCS (20 effluent samples x \$500/sample + \$2000 misc)

\$12,000

} 2 yrs

Quarterly System Performance Reports

- Labor (4 reports x 20 hr/report x \$60/hr)

\$4,800

- ODCS (4 reports x \$200/report)

\$800

} 2 yrs

Air Stripper Maintenance

\$7,000

2 yrs

LTM (annual for 10 yrs, followed by 4 biannual events)
 (from Alternative 1 spreadsheet)

\$8,235

18 yrs

LTM PM + Reporting (Alternative 1)

\$15,175

18 yrs

Semiannual + Annual Testing/Reporting for
 bioventing / biosparging system

\$21,435

(3 yrs)

SITE OT 27, MacA// AFB
Alternative 3, Present Worth Costs

$$PW = \text{Capital Costs} + [(\text{annual costs}) \times (\text{Present Worth factor})]$$

$$PWF \text{ 18 yrs} = \frac{(1+0.07)^{18} - 1}{(0.07)(1+0.07)^{18}} = 10.06$$

$$PWF \text{ 2 yrs} = \frac{(1+0.07)^2 - 1}{(0.07)(1+0.07)^2} = 1.81 \checkmark$$

$$PWF \text{ 3 yrs} = 2.62 \checkmark$$

$$\begin{aligned} PW = & \overset{a/}{(20,640)}(1.81) + \overset{b/}{(5,600)}(1.81) + \overset{c/}{(7,000)}(1.81) \\ & + \overset{d/}{69,772} + \overset{e/}{64,527} + \overset{f/}{(5,000)}(10.06) + \overset{g/}{(3,000)}(10.06) \\ & + \overset{h/}{90,422} + \overset{i/}{(21,435)}(2.62) = \boxed{5417,225} \end{aligned}$$

a/ GW extraction System O & M

b/ Quarterly GW Extraction System Reports

c/ Air Stripper Maintenance

d/ LTM of Dwell (from Alternative 1 spreadsheet)

e/ LTM Reporting (from Alternative 1 spreadsheet)

f/ Institutional Controls

g/ LTM PM

h/ Capital Costs (previous page)

i/ Semiannual + Annual Bioventing/biosparging system testing/reporting